DOCUMENT RESUME

ED 202 512 JC 810 286

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TITLE	Health Instruction Packages: Consumer--Safety and Emergencies.
INSTITUTION	League for Innovation in the Community Coll., Los Angeles, Calif.
SPONS AGENCY	Kellogg Foundation, Battle Creek, Mich.
PUB DATE	77
NOTE	121p.
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	Accident Prevention; Adult Education; Alarm Systems; Allied Health Occupations Education; Females; Fire Protection; *First Aid; Injuries; Learning Modules; *Safety Education
IDENTIFIERS	Bites and Stings; Cardiopulmonary Resuscitation; Crime Prevention; Emergencies; Fire Extinguishers; Safety Equipment; Self Defense

ABSTRACT

Texts, illustrations, and exercises are provided in these six learning modules which were designed to teach the general public how to deal with several emergency situations. The first module, "Cardio-Pulmonary Resuscitation (CPR)," was designed by Maris A. Lown to teach members of the public, nurses, and paramedics the techniques of unwitnessed CPR for an adult. The second module, prepared by M. W. Wester, Jr., instructs the user in "Removing Imbedded Fishhooks from Skin." The third module, "What About Animal Bites?," was prepared by Jeannette Bobst to teach elementary school children how to avoid animal bites and what to do if they are bitten. The fourth module, "Highway Flare Patterns" by Archie Sherman, Jr., discusses the hazards associated with flare usage, describes the process for lighting and extinguishing flares safely, and explains factors in flare placement. The fifth module, "Self-Defense for Women" by Barbara Murphy, describes several protection methods, muggers' favorite targets, the most vulnerable areas of an attacker, easily carried weapons, and methods of self-defense for several kinds of attacks. The module also helps women decide whether to remain passive or fight. The final module, "Red Code and Use of Fire Extinguishers" by Pauline Healy, describes how to initiate a fire alarm and use three types of fire extinguishers. The modules intersperse the text with reinforcement exercises and immediate feedback and conclude with post-tests. (AYC)

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HEALTH INSTRUCTION PACKAGES:

CONSUMER -- SAFETY AND EMERGENCIES

Modules prepared by:

Maris A. Lown
M. W. Wester, Jr., MD
Jeannette G. Bobst
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Barbara Murphy
Pauline Healy

HEALTH INSTRUCTION EXCHANGE

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A PROJECT OF THE LEAGUE FOR INNOVATION IN THE COMMUNITY COLLEGE

CARDIO-PULMONARY RESUSCITATION

by

Maris A. Lown

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TITLE OF PACKAGE:	Cardio-Pulmonary Resuscitation, Unwitnessed
AUTHOR:	Maris A. Lown
INSTITUTION:	Brookdale Community College, Lincroft, N.J.
INTENDED STUDENTS:	Public; nursing, paramedic
ESTIMATED WORKING TIME:	25 minutes
MATERIALS NEEDED:	Manikin-Resusci Annie or Andy, Recorder Annie (Manufactured by Laerdal Medical Corp. of Norway and distributed in the U.S. by Armstrong Industries, Inc., Northbrook, Ill.)
Revised:	Oct. 1, 1977

NOTE: This learning unit is based upon Guidelines of the American Heart Association. Effective use requires a manikin and two persons in addition to the student.

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INTRODUCTION

It has been estimated that about one million persons in the United States experience acute myocardial infarction (heart attacks) each year. More than 650,000 die annually of heart disease. About 350,000 of these deaths occur outside the hospital usually within two hours after the onset of symptoms. Thus sudden death from heart attack is the most important medical emergency today. It seems probable that a large number of these deaths can be prevented by prompt, appropriate treatment. In addition, many victims who die as a result of such accidents as drowning, electrocution, suffocation, drug intoxication or automobile accidents, could be saved by prompt and proper emergency care. It has become apparent that cardio-pulmonary resuscitation is the most effective method of dealing successfully with these emergencies.

As you complete this self-instructional unit, you will learn how to perform unwitnessed cardio-pulmonary resuscitation (one and two rescuer) for an adult.

Before you begin, it is suggested you familiarize yourself with the teaching manikin you will be using, Resusci Annie or Recorder Annie.

Resusci Annie is an inflatable manikin with two gauges that register compressions and ventilations. To achieve adequate compressions you must move the gauge into the red area on the dial. To achieve adequate ventilations you must move the gauge into the green area on the dial. A Hand pump accompanies Annie and is attached to her lower left side. The foot should not be used to inflate Annie. Plastic tubes extend from the chest near the neck and are connected to the proper gauges. The tube that enters near the throat measures ventilations; the other tube measures compressions.

VISUAL GAUGE
FOR RESUSCI ANNIE OR ANDY

Recorder Annie has a tape that records compressions and ventilations. It exits on the lower left side of Annie. Be sure her clothing does not obstruct passage of the tape. Please refer to the manufacturer's directions for tape replacement. Recorder Annie can be started by turning the control switch to on. The controls are in a box on Annie's right side.

PRACTICE EXERCISE #1

Establish unresponsiveness of the victim by slapping the shoulder and shouting "Are you OK?" Place the victim on his back. You have 4 to 10 seconds to turn the patient and establish unresponsiveness.

Practice Question #1

How would you establish unresponsiveness?

Answer

Shake the shoulder and shout, "Are you OK?"

PRACTICE EXERCISE #2

To establish breathlessness place your ear over the victim's nose to detect breathing and watch to see if the victim's chest rises and falls. You may place your hand on the victim's chest to aid you in determining whether or not he is breathing. Labored or noisy respirations often indicate a partially obstructed airway (difficulty in breathing).

Practice Question #2

How would you recognize inadequate or absent breathing?

Answer

Place your ear over the patient's nose and watch the chest. Listen for noisy or labored respiration.

PRACTICE EXERCISE #4

DIAGRAM 2

To perform mouth-to-mouth ventilation, maintain the head tilt position. Pinch the victim's nostrils together with your thumb and index finger and exert pressure on the forehead. Keep your other hand under the neck to maintain the backward tilt. Open your mouth wide. Take a deep breath. Make a tight seal with your mouth around the victim's mouth and blow into the victim's mouth, giving four quick breaths.

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, demonstrate mouth-to-mouth ventilation. Have another student check the gauge or tape to determine if your ventilations are adequate. You should be able to see Annie's chest rise and fall.

Are you having trouble ventilating Annie? You are probably not tilting the head backward enough. Review the previous section on the head tilt, making sure the head is back. Refer to Diagram One. This single maneuver if performed properly may start a victim breathing.

If you are still having trouble, check to be sure you have an airtight seal. Your mouth must completely cover Annie's and be airtight. Practice again.

Practice Question #4

In mouth-to-mouth ventilation, the rescuer makes a tight seal with his mouth around the victim's _____ .

The initial ventilation should consist of _____ _____ breaths.

Answers

mouth

four, quick

Cardiac arrest can be recognized by pulselessness in the large arteries, absent breathing, and a deathlike unresponsive appearance. The best place to quickly and easily locate a pulse is the side of the neck. By moving the index and the middle fingers two finger widths gently to either side of the neck, you should be able to locate the carotid (kar -ot' - id) pulse. You have five to ten seconds to determine whether or not there is a carotid pulse.

Try to obtain your own carotid pulse and that of another student.

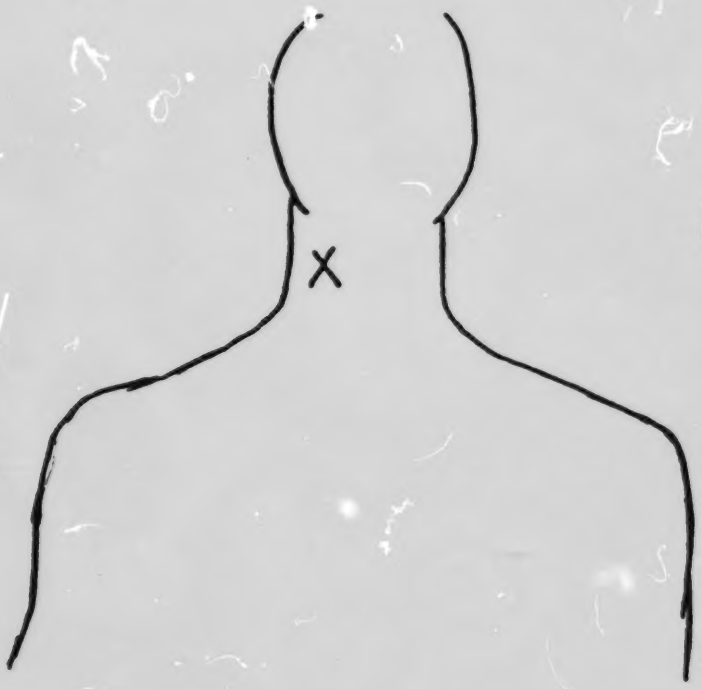


DIAGRAM 3

Practice Question #5

Cardiac arrest is recognized by pulselessness in the _____artery.

Answer

carotid

PRACTICE EXERCISE #6

The victim must always be in the horizontal position when external cardiac compression is performed. Effective cardiac compression requires sufficient pressure to depress an adult's lower sternum a minimum of 1½" to 2". 80-120 lbs. of pressure is required to accomplish adequate compression. The victim must be on his back on a firm surface.

Practice Question #6

To perform external cardiac compression place the victim on his _____.

Effective cardiac compression for an adult requires the sternum to be depressed _____ to _____ inches.

Answer

back

1½" - 2"

Practice Exercise #7

Position yourself close to the victim's side. Great care must be exercised not to place the hand over the lower tip of the breastbone (sternum) which is called the xiphoid process. To avoid this, feel the tip of the xiphoid process and move your hand up 1" to 1½" away from the tip of the xiphoid process toward the victim's head. Place the heel of one hand over the lower one-half of the sternum 1" to 1½" above the xiphoid process. Place the other hand on top of the first. You may interlock your fingers.

NOW DO THE FOLLOWING AS PRACTICE:

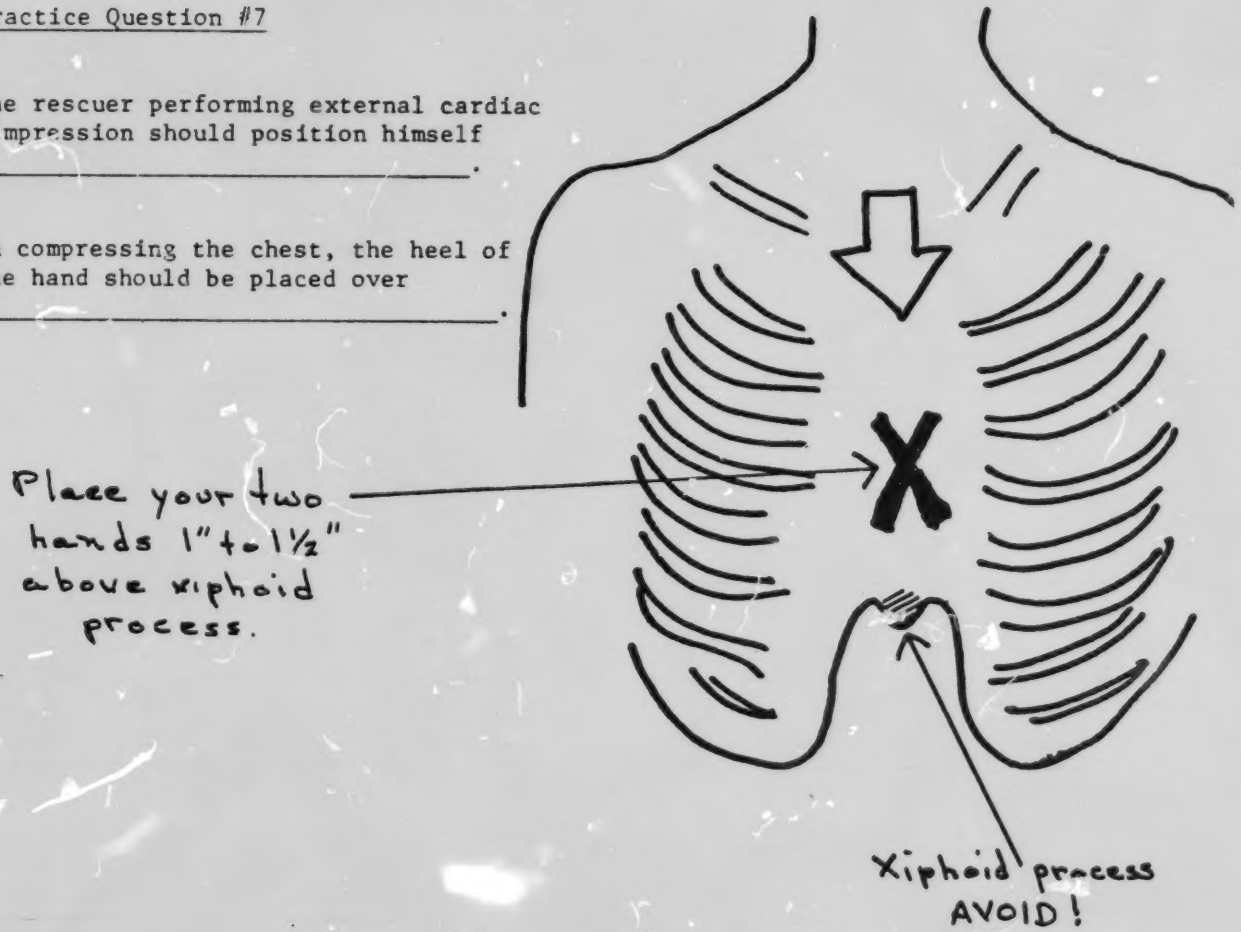
Using Annie, practice locating the proper position.

Diagram 4

Practice Question #7

The rescuer performing external cardiac compression should position himself _____.

In compressing the chest, the heel of the hand should be placed over _____.



Answers

at the victim's side
the lower sternum

Practice Exercise #8

Bring your shoulders directly over the victim's sternum. Keep your arms straight and exert pressure almost vertically downward to depress the sternum a minimum of 1 1/2" to 2". You should be exerting 80-120 lbs. of pressure.

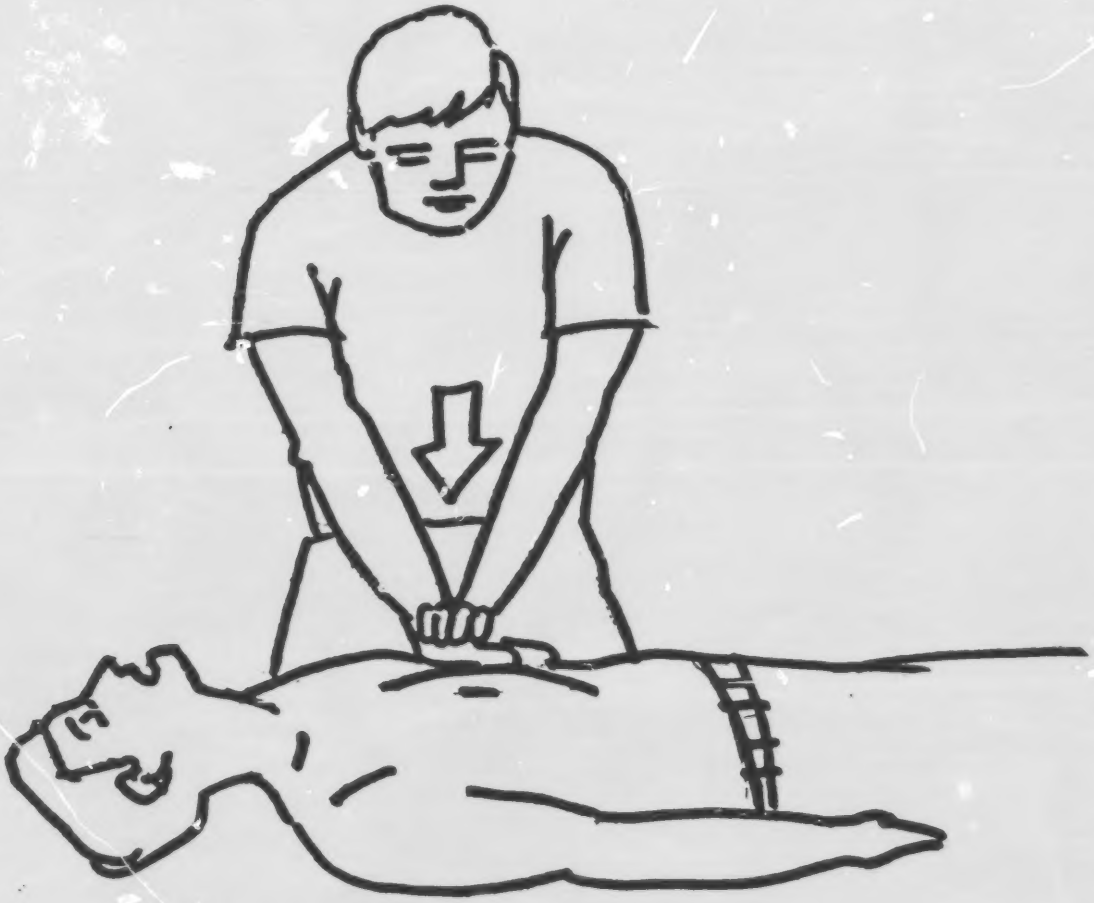


DIAGRAM 5

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, practice external cardiac compressions. Have the other student check the gauge, or tape to determine whether your compressions are inadequate, adequate or too forceful.

Are you finding it difficult? It is difficult! While the maneuver itself is simple, only with repeated practice will you be able to perform proper compressions.

Compressions must be regular, smooth and uninterrupted. Relaxation must immediately follow compression and be of equal duration. The heel of the hand should not be removed from the chest during relaxation but pressure on the sternum should be completely released.

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, practice compressions that are smooth, uninterrupted and regular. Remember, compression and relaxation should be of equal duration.

You are probably having difficulty adminstering smooth, even compressions. Relax! Remember to keep your arms straight. Using a rocking motion, bring the weight of your body down on Annie's sternum. Do not remove the heel of the hand from her chest. Only practice will provide the proper technique that will keep the victim alive.

Practice Question #8

The compression and relaxation portion of external cardiac compression should be _____.

Should the heel of the hand stay in contact with the chest?

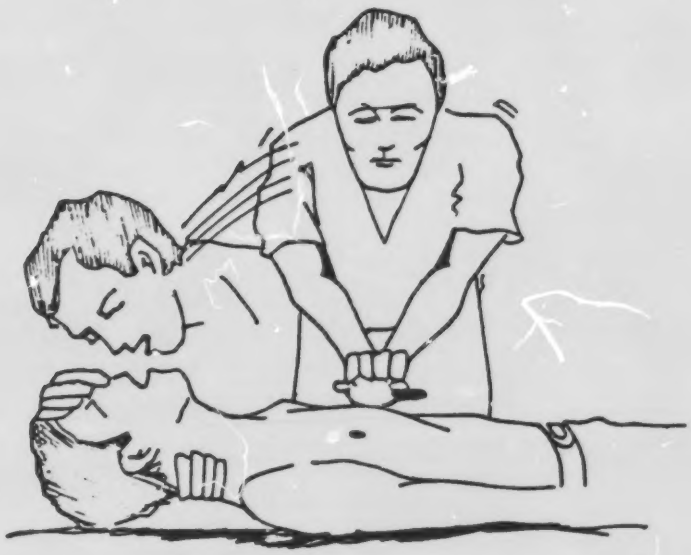
Answers

of equal duration

yes

PRACTICE EXERCISE #9

The single rescuer performs cardiac compressions at the rate of 80 per minute saying the mnemonic,"one and two and three and four and five, etc." in metronome fashion.



• One Rescuer Cardiopulmonary Resuscitation •

DIAGRAM 6

NOW DO THE FOLLOWING AS PRACTICE:

Using Annnie, practice 15 compressions using the mnemonic.

PRACTICE QUESTION #9

One rescuer performs external cardiac compression at the rate of _____ per minute.

Answer

80

PRACTICE EXERCISE #10

When there is only one rescuer you must perform the two compressions and ventilations together using a 15:2 ratio (15 compressions to two ventilations). The two full lung inflations must be delivered in rapid succession, within a period of 5 to 6 seconds. (Diagram Six) You have 60 seconds to perform four cycles of compressions and ventilations.

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, demonstrate four cycles of compressions and ventilations.

Practice Question #10

What ratio of compressions to ventilations should one rescuer use when he performs cardio-pulmonary resuscitation on an adult?

Are the two breaths delivered quickly or slowly?

Answers

15 compressions to two ventilations

quickly

After four cycles of compressions and ventilations, check the pulse and breathing. You have five seconds to check the pulse and breathing.

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, check pulse and breathing.

PRACTICE EXERCISE #11

Since artificial circulation must always be combined with artificial ventilation, it is preferable to have two rescuers. The first rescuer positions himself at the victim's side and performs external cardiac compression while the other one remains at the victim's head and ventilates. The compression rate for two rescuers is 60 per minute. The ratio now changes to five compressions and one ventilation: a 5:1 ratio. The ventilator delivers the major portion of the breath during the fifth upstroke. Performance is usually best with the two rescuers on opposite sides of the victim. Since the rate of compressions is slower the compressor switches to the two rescuer mnemonic, "one thousand one, one thousand two, one thousand three, etc." The compressor never pauses. Since proper compression only restores 25% to 30% of the circulation, it must not be interrupted and must be performed correctly.

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, practice two rescuer cardio-pulmonary resuscitation.

Practice Question #11

When cardio-pulmonary resuscitation is performed by two rescuers, the ratio of chest compressions to lung inflations is _____.

Answer

5:1

PRACTICE EXERCISE #12

When switching places with a partner in performing two rescuer cardio-pulmonary resuscitation, the rescuer performing the compressions calls for a switch and moves first.

Practice Question #12

When switching places with a partner in performing cardio-pulmonary resuscitation, who moves first?

Answer

the rescuer performing the compressions

Practice

After a minimum of two cycles of five compressions and one ventilation, the compressor calls for a switch by saying, "One thousand one, one thousand two, one thousand three, one thousand four, one thousand five, we-will-switch-next-time" in rhythm with his compressions. After the ventilator delivers a breath on the upstroke that accompanies "time", he moves down across from the compressor - as the compressor continues the previous count-"one thousand one, one thousand two, one thousand three." He landmarks (feels the xiphoid process) and positions his hands correctly over the lower sternum. The compressor moves up to ventilate and the new compressor picks up the count -"one thousand five ....." The new ventilator should inflate on the upstroke that accompanies five.

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, demonstrate a switch.

If you are having difficulty, remember that the compressor calls for the switch but the ventilator initiates the change by positioning his hands correctly. Both rescuers must be ready to move at the proper time. It is necessary that both rescuers be thoroughly familiar with this procedure. It requires a good deal of practice to switch smoothly.

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, demonstrate one and two rescuer unwitnessed cardio-pulmonary resuscitation. Have another student observe you using the cardio-pulmonary resuscitation check list.

POST-TEST

1. What four criteria are used to diagnose respiratory arrest?
2. How is the airway opened?
3. How is an airtight seal maintained in mouth-to-mouth ventilation?
4. How many breaths should the rescuer give during the initial ventilation?
5. What three criteria are used to diagnose cardiac arrest?
6. In what position must the victim be to perform external cardiac compression?
7. How far must the sternum be depressed in external cardiac compression for an adult?
8. Where on the sternum does the rescuer place his hand to perform external cardiac compression?
9. Describe the motion used in chest compression.
10. How many compressions per minute should the single rescuer perform?
11. What is the ratio of compressions to ventilations in single rescuer cardio-pulmonary resuscitation?
12. What is the ratio of compressions to ventilations in two rescuer cardio-pulmonary resuscitation?
13. Number the following so that proper sequence of action is followed.

a. _____check the carotid pulse.

b. _____begin artificial ventilation with four great breaths

c. _____begin cardiac compression

d. _____open the airway

e. _____check for unresponsiveness

f. _____check for breathing

SCORING KEY TO POST-TEST

1. noisy or labored respirations
   absence of expiratory air from victim's nose
   absence of chest movement
   unresponsiveness

2. by placing one hand under the neck and the other on the forehead, and lifting the neck to tilt the head backward

3. the rescuer opens his mouth widely and covers the victim's entire mouth firmly

4. four

5. pulselessness in the carotid artery
   unresponsiveness
   absent breathing

6. flat on his back on a firm surface

7. 1 1/2" to 2"

8. 1 1/2" above the xiphoid process

9. regular, smooth, uninterrupted, and of equal duration (your words will differ, but should convey this meaning)

10. 80

11. 15:2

12. 5:1

13. a. 5
    b. 4
    c. 6
    d. 2
    e. 1
    f. 3

Jan 10/1978
Revision
from author
Updated math.
from here
should be
included before
any additional
printing of
Oct. 1, 1977
HIE revision
B.P.

SELF-INSTRUCTIONAL UNIT

Cardio-Pulmonary Resuscitation

by

Maris A. Lown

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DESCRIPTION OF PACKAGE

Instructor's Name: Maris A. Lown

Institution: Brookdale Community College

Class, Course, or Area: May be used to teach cardio-pulmonary resuscitation at the eighth grade level up to professional health care providers.

Topic: Cardio-Pulmonary Resuscitation
(Formulated according to guidelines of the American Heart Association)

INTRODUCTION

It has been estimated that about one million persons in the United States experience acute myocardial infarction each year. More than 650,000 die annually of ischemic heart disease. About 350,000 of these deaths occur outside the hospital usually within two hours after the onset of symptoms. Thus sudden death from heart attack is the most important medical emergency today. It seems probable that a large number of these deaths can be prevented by prompt, appropriate treatment. In addition, many victims who die as a result of such accidents as drowning, electrocution, suffocation, drug intoxication or automobile accidents, could be saved by prompt and proper emergency care. It has become apparent that cardio-pulmonary resuscitation is the most effective method of dealing successfully with these emergencies.

OBJECTIVES OF UNIT

Overall Objective

Perform one and two rescuer unwitnessed cardio-pulmonary resuscitation for an adult.

Sub-Objective

1. Explain how the diagnosis of respiratory arrest is made.
2. Explain and demonstrate how the airway is opened.
3. Explain and demonstrate mouth to mouth ventilation.
4. Explain how the diagnosis of cardiac arrest is made.
5. Demonstrate external cardiac compression.
6. Demonstrate four cycles of compressions and ventilations.
7. Demonstrate two cycles of compression and ventilation with a second rescuer.
8. Demonstrate how to switch positions and repeat two cycles of compression and ventilation with a second rescuer.
9. Demonstrate one and two rescuer unwitnessed cardio-pulmonary resuscitation.
10. Request American Heart Association Basic II Certification.

In order to complete this package, you will also need a manikin and two other students.

Before you begin, it is suggested you familarize yourself with the teaching maniken you will be using, Resusci Annie or Recorder Annie.

Resusci Annie is an inflatable manikin with two gauges that register compressions and ventilations. To achieve adequate compressions you must move the gauge into the red area on the dial. To achieve adequate ventilations you must move the gauge into the green area on the dial. A hand pump accompanies Annie and is attached to her lower left side. The foot should not be used to inflate Annie. Plastic tubes extend from the chest near the neck and are connected to the proper gauges. The tube that enters near the throat measures ventilations, the other tube measures compressions.

Recorder Annie has a tape that records compressions and ventilations. It exits on the lower left side of Annie. Be sure her clothing does not obstruct passage of the tape. Please refer to the manufacturer's directions for tape replacement. Recorder Annie can be started by turning the control switch to on. The controls are in a box on Annie's right side.

PRACTICE EXERCISE #1

Input

Establish unresponsiveness of the victim by slapping the shoulder and shouting "Are you OK?" Place the victim on his back. You have four to ten seconds to turn the patient and establish unresponsiveness.

Practice Question #1

How would you establish unresponsiveness?

Feedback

Shake the shoulder and shout "Are you OK?","Are you OK?"

PRACTICE EXERCISE #2

Input

The victim must be on his back. Kneel at his right side by his head. Open the Airway (the path by which oxygen reaches the lungs) by sliding your right hand under the victim's neck and placing your left hand on his forehead. Lift the neck with your right hand and tilt the head backward exerting downward pressure on the forehead with your left hand. See Diagram One.

Practice Question #2

Using Annie, demonstrate the head tilt. Complete the following: The rescuer places the right hand beneath the victim's _____and the left on his _____.

Feedback

See Diagram One.

neck

forehead

PRACTICE EXERCISE #3

Input

To establish breathlessness place your ear over the victim's nose to detect breathing and watch to see if the victim's chest rises and falls. You may place your hand on the victim's chest to aid you in determining whether or not he is breathing. Labored or noisy respirations often indicate a partially obstructed airway (difficulty in breathing). You have three to five seconds to open the airway and establish breathlessness.

Practice Question #3

How would you recognize inadequate or absent breathing?

Feedback

Place your ear over the patient's nose and watch the chest. Listen for noisy or labored respiration.

PRACTICE EXERCISE #4

Input

To perform mouth to mouth ventilation, maintain the head tilt position. Pinch the victim's nostrils together by reaching with your left thumb and index finger while maintaining pressure on the forehead with the side of the left hand. Keep your right hand under the neck to maintain the backward tilt. Open your mouth wide, take a deep breath, make a tight seal with your mouth around the victim's mouth and blow into the victim's mouth giving four quick breaths. (Diagram 2) Do not allow time for the lung deflation. You have 3 - 5 seconds to give the four ventilations.

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, demonstrate mouth to mouth ventilation. Have another student check the gauge or tape to determine if your ventilations are adequate. You should be able to see Annie's chest rise and fall.

Are you having trouble ventilating Annie? You are probably not tilting the head backward enough. Review the previous section on the head tilt, making sure the head is back. Refer to Diagram One. This single maneuver if performed properly may start a victim breathing.

If you are still having trouble, check to be sure you have an airtight seal. Your mouth must completely cover Annie's and be airtight. Practice again.

Practice Question #4

In mouth to mouth ventilation, the rescuer makes a tight seal with his mouth around the victim's _____.

The initial ventilation should consist of _____ _____ breaths.

Feedback

mouth

four, quick

PRACTICE EXERCISE #5

Input

Cardiac arrest can be recognized by pulselessness in the large arteries, absent breathing, and a deathlike unresponsive appearance. The best place to quickly and easily locate a pulse is the side of the neck. By moving the index and the middle fingers two finger widths to either side of the neck, you should be able to locate the carotid (kar - ot' - id) pulse. (Diagram Three) Establish pulselessness by placing your right index and middle fingers on the right side of the neck. You have five to ten seconds to determine whether or not there is a carotid pulse.

Try to obtain your own carotid pulse and that of another student.

Practice Question #5

Cardiac arrest is recognized by pulselessness in the _____ artery.

Feedback

Carotid

PRACTICE EXERCISE #6

Input

The first four steps of the correct sequence in cardio-pulmonary resuscitation are:

1) establish unresponsiveness (4 - 10 sec)
2) open the airway and establish breathlessness (3 - 5 sec)
3) give four ventilations (3 - 5 sec)
4) establish pulseness (5 - 10 sec)

Practice Question #6

Number the steps below in proper sequence:

_____ open the airway and establish breathlessness

_____ establish pulseness

_____ establish unresponsiveness

_____ give four ventilations

Feedback

2

4

1

3

PRACTICE EXERCISE #7

Input

You are doing well.

If you have reached this point, you now know enough to help save lives. Let's go on and master cardiac compression.

The victim must always be in the horizontal position when external cardiac compression is performed. Effective cardiac compression requires sufficient pressure to depress an adult's lower sternum a minimum of 1½ to 2 inches. 80-120 lbs. of pressure is required to accomplish adequate compression. The victim must be on a firm surface.

Were your movements smooth and sure? Were you able to progress to each activity easily? Did you allow your self enough time to check the carotid pulse? Were your ventilations delivered quickly? Remember minutes count in an emergency you must be able to initiate cardio-pulmonary resuscitation without hesitation.

NOW DO THE FOLLOWING AS PRACTICE

Using Annie Practice this sequence until you can do it smoothly and in proper sequence. Have another student count out the seconds so you can assess your time.

Practice Questions #7

1. To perform external cardiac compression place the victim on his _____.

2. Effective cardiac compression for an adult requires the sternum to be depressed _____ to _____ inches.

3. How long do you have to accomplish each of the following activities:

Establish unresponsiveness	_____ seconds
Open the airway and establish breathlessness	_____ seconds
Give four ventilations	_____ seconds
Establish pulselessness	_____ seconds

Feedback

back	3 - 5 seconds
1½ to 2	3 - 5 seconds
4 - 10 seconds	5 - 10 seconds

PRACTICE EXERCISE #8

Input

Position your self close to the victims side as you move toward the foot. Your left knee should be opposite the shoulder. Great care must be exercised not to place the hand over the lower tip of the breastbone (sternum) which is called the Xiphoid Process. (Diagram Four) To avoid this, "Landmark" with your right hand by sliding the index and middle fingers of the right up the edge of the rib cage into the notch in the center of the chest. With the middle finger in the notch, lay the index finger alongside the middle finger. Place the long axis of the heel of your left hand over the long axis of the lower one half of the sternum with the heel touching the index finger of your right hand. Place your right hand over the left. You may interlock your fingers. Keep you fingers off the chest wall.

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, practice locating the proper position.

Practice Question #8

The rescuer performing external cardiac compression should position himself

_____.

In compressing the chest the heel of the hand should be placed over

_____.

Feedback

at the victim's side

the lower sternum, two finger breaths above the xyphoid process

PRACTICE EXERCISE #9

Input

Bring your shoulders directly over the victim's sternum, keep your arms straight and exert pressure almost vertically downward to depress the sternum a minimum of one and one-half to two inches. You should be exerting 80-120 lbs. of pressure. (Diagram Five)

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, practice external cardiac compressions. Have the other student check the gauge or tape to determine whether your compressions are inadequate, adequate or too forceful.

Input

Are you finding it difficult? It is difficult! While the maneuver itself is simple, only with repeated practice will you be able to perform proper compressions.

Compressions must be regular, smooth and uninterrupted. Relaxation must immediately follow compression and be of equal duration. The heel of the hand should not be removed from the chest during relaxation but pressure on the sternum should be completely released.

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, practice compressions that are smooth, uninterrupted and regular. Remember, compression and relaxation should be of equal duration.

Input

You are probably having difficulty administering smooth, even compressions. Relax! Remember to keep your arms straight. Using a rocking motion, bring the proper technique that will keep the victim alive.

Practice Questions #9

The compression and relaxation portion of external cardiac compression should be _____.

Should the heel fo the hand stay in contact with the chest?

Feedback

of equal duration

yes

PRACTICE EXERCISE #10

Input

The single rescuer performs cardiac compressions at the rate of 80 per minute saying the mnemonic one and two and three and four and five, one and two and three and four and ten, one and two and three and four and fifteen, in metronome fashion.

NOW DO THE FOLLOWING AS PRACTICE:

Practice Questions #10

One rescuer performs external cardiac compression at the rate of _____ per minute.

Feedback

80

Input

When there is only one rescuer you must perform the compressions and ventilations together using a 15:2 ratio. 15 compressions to 2 ventilations within 15 seconds. The two full lung inflations must be delivered in rapid succession, within a period of 4 to 6 seconds. (Diagram Six) Deliver 15 compressions making sure you are in the proper position. When you are ready to administer the ventilations, move your left knee toward the victim's head, hyperextend the head, pinch the nostrils and give two breaths. Always remember to landmark when you move back to deliver the next cycle of 15 compressions. If you are unsure of the proper procedure, refer back to practice exercise #8. You have 60 seconds to perform 4 cycles of compressions and ventilations.

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, demonstrate 4 cycles of compressions and ventilations.

Practice Questions #10

What ratio of compressions to ventilations should one rescuer use when he performs cardio-pulmonary resuscitation on an adult?

Are the two breaths delivered quickly or slowly?

Feedback

15 compressions to 2 ventilations

quickly

PRACTICE EXERCISE #10

Input

After 4 cycles of compressions and ventilations, check the pulse and breathing. You have 5 seconds to check the pulse and breathing.

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, check pulse and breathing. Give four cycles of compressions and ventilations, then check pulse and breathing after the last two ventilations.

PRACTICE EXERCISE #11

Input

Since artificial circulation must always be combined with artificial ventilation, it is preferable to ahve two rescuers. The first rescuer positions himself at the victim's right side and performs external cardiac compression while the other one remains at the victim's head on his left side and ventilates. The compression rate for two rescuers is 60 per minute. The ratio now changes to 5 compressions and one ventilation. A 5:1 ratio. The ventilator delivers the major portion of the breath during the 5th upstroke. Performance is best with the two rescuers on opposite sides of the victim. Since the rate of compressions is slower the compressor switches to the two rescuer mnemonic, one one thousand, two one thousand, three one thousand, etc. The compressor never pauses. Since proper compression only restores 25% to 30% of the circulation, it must not be interrupted and must be performed correctly.

The second rescuer positions himself on the victim's left side and prepares to take over ventilations after the compressor has delivered a complete cycle of 15 compressions and 2 ventilations. The compressor now changes to the slower mnemonic.

NOW DO THE FOLLOWING AS PRACTICE:

Using, Annie, practice 2 rescuer cardio-pulmonary resuscitation.

Practice Questions #11

When cardio-pulmonary resuscitation is performed by 2 rescuers the ratio of chest compressions to lung inflations is _____.

Feedback

5:1

PRACTICE EXERCISE #12

Input

When switching places with a partner in ferforming 2 rescuer cardio-pulmonary resuscitation, the rescuer performing the compressions calls for the switch. The ventilator iniatiates the switch.

Practice Question #12

When switching places with a partner in performing cardio-pulmonary resuscitation, who moves first?

Feedback

the ventilator

Input

After a minimum of two cycles of 5 compressions and one ventilation, the compressor calls for a switch by saying, "One one thousand, two one thousand, three one thousand, four one thousand, five one thousand, we will switch next time" in rhythm with his compressions. After the ventilator delivers a breath on the upstroke that accompanies "time", he moves down across from the compressor - as the compressor resumes the previous count - one one thousand, two one thousand, three one thousand. He landmarks (feels the xiphoid process) and positions his hands correctly over the lower sternum. The compressor moves up to ventilate and the new compressor picks up the count - one one thousand four, one thousand five. The new ventilator should inflate on the upstroke that accompanies five. The ventilator takes over the compression no later than four one thousand.

NOW DO THE FOLLOWING PRACTICE:

Using Annie, demonstrate a switch.

Input

If you are having difficulty, remember that the compressor calls for the switch but the ventilator iniates the change by positioning hsi hands correctly. Both rescuers must be ready to move at the proper time. It is necessary that both rescuers be thoroughly familiar with this procedure. It required a good deal of practice to switch smoothly.

NOW DO THE FOLLOWING AS PRACTICE:

Using Annie, demonstrate one and two rescuer unwitnessed cardio-pulmonary resuscitation. Have another student observe you using the cardio-pulmonary resuscitation check list.

POST-TEST

1. What criteria are used to diagnose respiratory arrest?
2. How is the airway opened?
3. How is an airtight seal maintained in mouth to mouth ventilation?
4. How many breaths should the rescuer give during the initial ventilation?
5. What criteria are used to diagnose cardiac arrest?
6. In what position must the victim be to perform external cardiac compression?
7. How far must the sternum be depressed in external cardiac compression for an adult?
8. Where on the sternum does the rescuer place his hand to perform external cardiac compression?
9. Describe the motion used in chest compression.
10. How many compressions per minute should the single rescuer perform?
11. What is the ratio of compressions to ventilations in single rescuer cardio-pulmonary resuscitation?
12. What is the ratio of compressions to ventilations in two rescuer cardio-pulmonary resuscitation?
13. Number the following so that proper sequence of action is followed.

_____check the carotid pulse

_____begin artificial ventilation with four great breaths

_____begin cardiac compression

_____open the airway

_____check for unresponsiveness

_____check for breathing

PLEASE COMPLETE THE FOLLOWING

I found the contents of this unit to be

Clear	
Interesting	
Important	
Boring	
Relevant	
Too difficult	

DIAGRAM 2

23

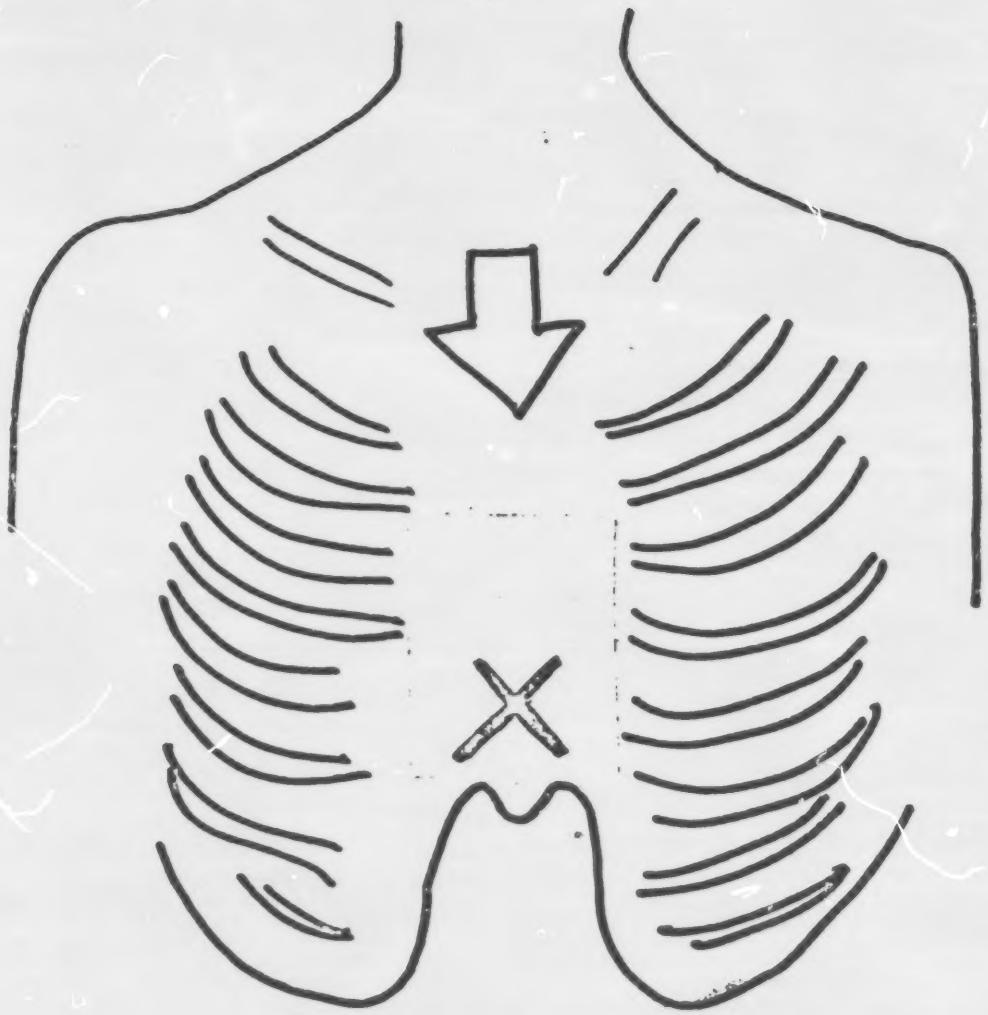

DIAGRAM 4

• ONE RESCUER CARDIOPULMONARY RESUSCITATION •

DIAGRAM 6

AMERICAN HEART ASSOCIATION
CPR-ECC CRITICAL PERFORMANCE RATIONALE

BASIC LIFE SUPPORT - ONE & TWO RESCUERS

TIME (Seconds)	ACTIVITY	CRITICAL PERFORMANCE	RATIONALE
0-15 (One Rescuer)	Diagnose that there is an unresponsive victim.	Shake shoulder, Shout - "Are you OK?"	Most victims will be on face - at least often. One concern about teaching lay people about CPR is the risk of unnecessary resuscitation and possible damage from resuscitating sleepers, fainters, etc. unnecessarily. Accurate diagnosis is important. 15 seconds gives time to do that and to review mentally the sequence of CPR.
15-30	Open Airway	Kneels on right side of manikin - right knee opposite shoulder. Right hand under neck, left hand on forehead (reverse it on left side).	Airway must be opened to establish breathlessness. Many victims may be making violent or minimal respiratory efforts that are ineffective because of obstruction.
	Establish absence of breathing	Turn head toward foot with ear directly over and close to victim's mouth. Hear and feel breathing on ear. Look for respiratory effort.	Hearing and feeling are therefore the only true way of determining presence of breathing. Feeling is the motion of air and/or warmth. If you cannot feel or hear, and there is respiratory movement, the airway is still obstructed.
	Breathe four times	Pinch off nostrils with left thumb and forefinger. Open mouth widely, make tight seal. Remove mouth after each breath and look toward chest.	This enables you to see the chest fall on expiration and permits you to take a deep breath of fresh air.
30-45	Palpate carotid pulse	Place fingers on voice box just below chin. Use right hand. Slide fingers into groove between voice box and muscle.	This activity <u>should</u> take fifteen seconds, because not only does it take time to find the right place, but the pulse may be very slow or very weak and rapid.

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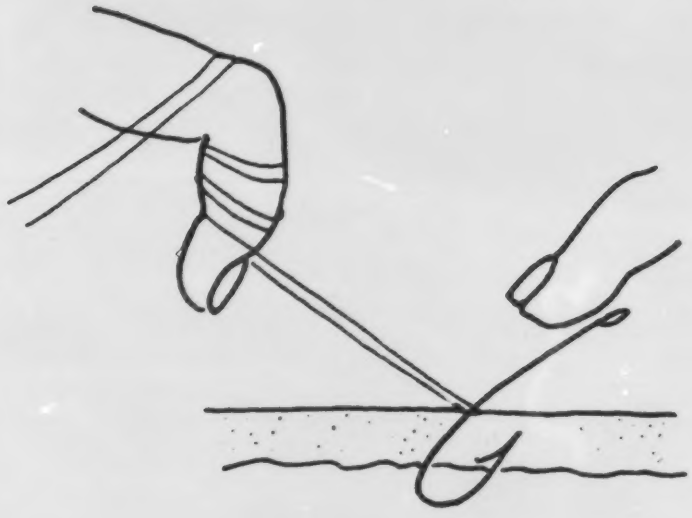
REMOVING IMBEDDED FISHHOOKS FROM SKIN - AN EASY WAY

by

M. W. Wester, Jr., M.D.



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TITLE OF PACKAGE:	Removing Imbedded Fishhooks from Skin - An Easy Way
AUTHOR:	M. W. Wester, Jr., M.D.*
INSTITUTION:	Wester Tucker Clinic
INTENDED STUDENTS:	Public
ESTIMATED WORKING TIME:	10 minutes
MATERIALS NEEDED:	Fishhook; fishing line; orange or sponge
REVISED:	Oct. 1. 1977

*Some changes were made by Stuart Johnson, Ed.D.

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PRE-TEST

Have you ever had trouble removing a fishhook? Have you ever been at a loss because of lack of equipment to remove a fishhook in the field? If so, this package can help you!

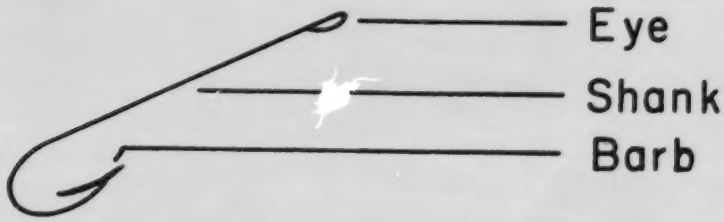
INTRODUCTION

Frequently a fishhook becomes imbedded in the skin at the most inopportune times and in the most uncomfortable places. It usually occurs when you are without much equipment and always when the fish are bitting the best.

This self-instructional package will provide you with a proven technique that will enable you to remove fishhooks from the skin in most circumstances, using only a piece of string (fishing line, suture, or any hand thread) and also retrieve intact that favorite fishing lure!

INPUT:

Most fishhooks are shaped with barbs on the inner portion of the hook, facing the shank (see illustration).



This barb is to keep the fish from spitting out the hook (and also keeps the hook from easily 'backing out' of the skin, once it is imbedded). Because of the shape of the hook, it is very hard to 'back out' without aid. This minor emergency has traditionally been approached in one of two ways in order to remove the hook:

1. To try to force the hook with the barb through the skin, cutting off the barb with wire cutters (and destroying the lure) then backing out the de-barbed hook. This can be painful, and though it doesn't require nerves of steel, it may need the help of a strong nurse or orderly.

2. Anesthetizing the area near the shank, and then with a #11 surgical blade cutting the barb loose from the tissue and backing the intact barb out. This usually adds to the healing time, and may even require a stitch to close the area if the lure was big. Usually antibiotics are not required.

PRACTICE:

A. Fishhooks removed by forcing the hook through the skin require all but one of the following:

1. Wirecutters or other metal cutting pliers.
2. Sacrifice of hook (maybe the fisherman's favorite hook!)
3. A lot of nerve by the patient.

B. Fishhooks removed by cutting the skin require all but one of the following:

1. Regional anesthesia.
2. Prolonged healing.
3. Always needs antibiotics.

FEEDBACK:

The answer to A is 3. It is not necessary for the patient to have nerves of steel, but it helps. This can be overcome by additional holding from other people.

The answer to B is 3. Of course fishhooks removed by cutting don't always require coverage by antibiotics, but cutting does prolong healing.

INPUT:

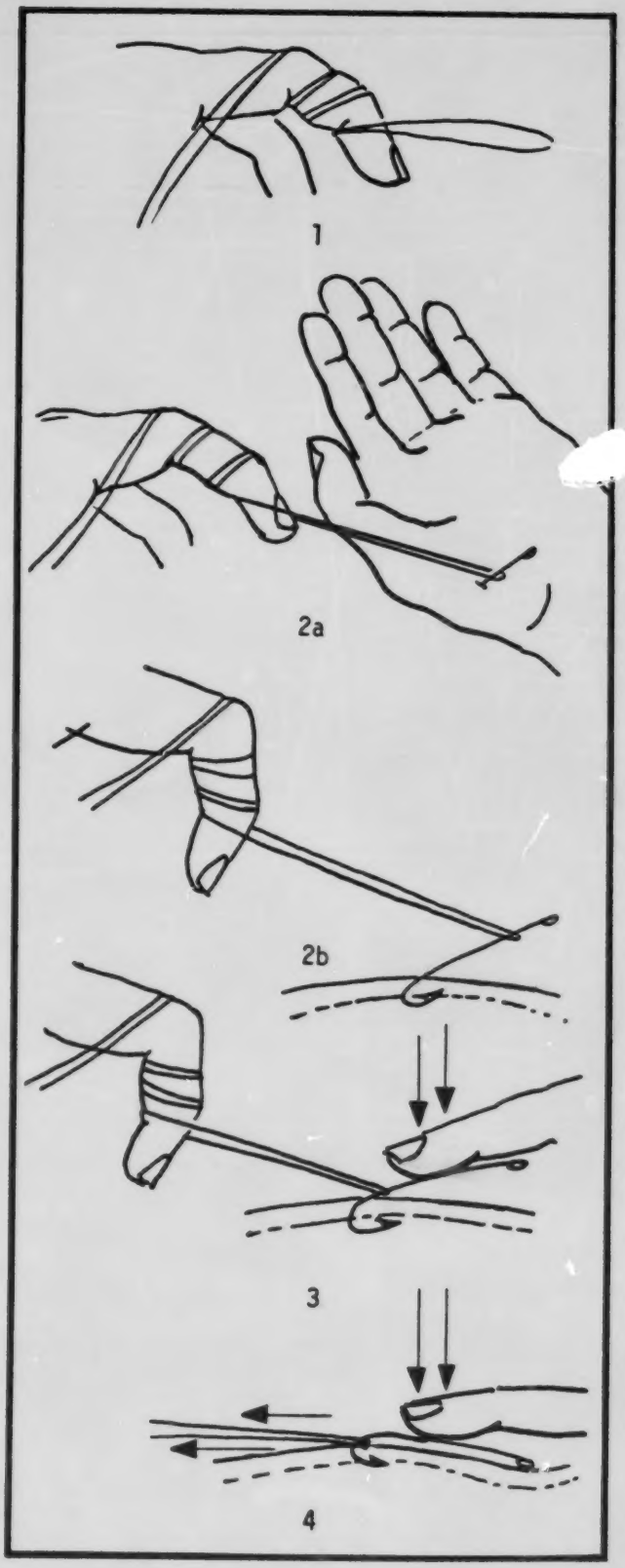
On the next page we will describe the steps by which you can remove imbedded fishhooks in a simple way. After that we will ask you to try the procedure with a real hook.

1. Take a piece of line (if necessary double it to increase the strength of the line) and wrap it around the index finger of one hand (this will be the pulling hand) to form a loop. See illustration #1.

2. Place the loop thus made over the shank of the exposed fishhook to the point where the hook enters the flesh. See illustration #2a, and 2b.

3. Disengage the barb of the hook from the tissue by pressing the shank firmly down to the skin. Then start to apply a gentle pull on the string. See illustration #3 and note direction of push <u>downward</u> toward the skin.

4. Increase the pull on the string firmly and steadily, keeping the string parallel and as <u>close to the skin as</u> possible. The barb will then let go and slide out of the skin with a slight jerk. See illustration #4.



PRACTICE:

Before continuing, please review the steps below:

A. This technique may be used

1. by anyone almost everywhere
2. by doctors only
3. only at the hospital

B. The string may be

1. fishing line
2. silk thread
3. nylon suture
4. all of the above

C. To disengage the barb and let the hook slide out you must

1. pull up on the shank of the hook
2. push the shank firmly down to the skin

FEEDBACK:

The answer to A is 1. This technique is indeed simple.

The answer to B is 4. Any piece of line that is flexible and has any strength will do.

The answer to C is 2. <u>The firm push down is necessary</u>.

PRACTICE CYCLE FOR OVERALL OBJECTIVE

You now have read about an easy, efficient method requiring little skill and almost no equipment that can be performed by yourself after only a short practice.

You now will demonstrate with a fellow student how to extract a fishhook. For the purpose of practice we suggest that you use a piece of plastic foam or an orange. Place the hook deeply in the material (or orange) so that the barb engages. Have your fellow student press down firmly on the "skin" on either side of the hook. Go through the steps to disengage the hook and remove it.

If you proceeded properly, the hook should have disengaged and slid out. If the withdrawal resisted, or if you got a piece of foam or orange peel on the barb, then the barb did not disengage smoothly enough.

-NOTE-

1. You may decide not to use this procedure if the hook is located where tissue damage may be a problem, for example, near the eye.

2. In some instances, there may be need for tetanus prophylaxis.

In these instances, seek competent assistance.

POST-TEST

1. For a post test, you may now demonstrate your acquired skill by removing a hook from a sponge or orange.

2. Do you now feel more confident?

3. Can you pull away on the real hook in a real patient?

   If you remain uncertain, try the procedure with a piece of steak. Embed the hook through any connective tissue you can locate.

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WHAT ABOUT ANIMAL BITES?

By

Jeannette G. Bobst

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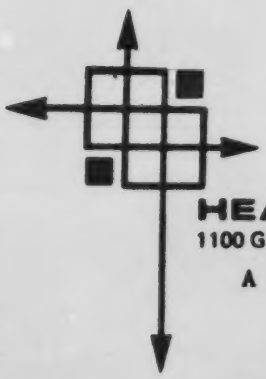
Title of Package:	What About Animal Bites !!!
Author:	Jeannette G. Bobst, CHN
Institution:	Lane County(Oregon)Health Division
Intended Students:	Elementary School
Estimated Working Time:	20 Minutes
Materials Needed:	None
Revised:	Nov. 15, 1977



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Introduction:

Hi! I'm glad you decided to look me over! Not too many students are interested in animal bites --- even though every year a lot of children are bitten by all kinds of animals. Today you are going to learn how to avoid animal bites and what to do if you are bitten!

Everyday many, many children like you are bitten by all kinds of animals. Sometimes the bite is so bad that the child is left with a big scar! There are times when children get real sick or may even die. So you see animal bites can be very serious.

Have You Ever Been Bitten By An Animal?? Do you remember why it bit you? Today you are going to #1 Learn how to avoid being bitten and #2 Learn what to do if you are bitten by an animal.

You will be able to:

- Give examples of wild and domestic animals that sometimes bite children.
- Tell the three things that could happen to you after an animal bites you.
- Describe what to do if you are bitten by an animal.
- Tell ways to avoid being bitten by an animal.

Exercise #1

Many children everyday are bitten by all kinds of animals. Sometimes their own dog or cat bites them. Farm animals like horses, cows, and goats bite, too, and they are all called DOMESTIC animals. Sometimes while hiking and camping children are bitten by skunks, raccoons or bats, and they are all called WILD animals.

Practice Ouestion #1:

There are all kinds of animals that bite children . Skunks, raccoons and bats are grouped together and are called WILD animals. Dogs, cats and cows are grouped together and are called DOMESTIC animals.

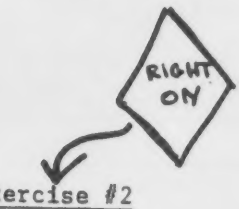
1) Can you name another Wild animal? _____

2) Can you name another Domestic animal? _____

If for #1, you named fox, rat, snake, rabbit, squirrel or any other then you are correct.

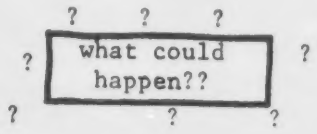
If for #2, you named sheep, horse, guinea pig or some other common animal that can stay in your house then you are also correct. Good for you!

Okay, so now you know that there are two groups of animals that could bite you . Let us go on and see what could happen if you are bitten ..... and I hope it never happens to you.



Exercise #2

Just as there are many kinds of animals, there are many kinds of bites! BIG bites, little bites, many bites, bites, bites, bites, and maybe just one bite. Some bites hurt a lot and other bites don't hurt at all. But remember, all bites are serious and can cause other bad things to happen to you.



First thing that could happen is that it probably will "HURT" especially if it is on the finger or face!

Second thing is that the animal bite could give you some bad germs that could make you real SICK !

The third thing is that you could get an INFECTION where the animal bit you.

SO YOU SEE, IT COULD BE A VERY SERIOUS PROBLEM.

Practice Question #2:

There are all kinds of bites that animals can make: BIG bites, small bites, and bad bites. Really, there are three things that could happen to you after an animal bites.

Circle the three words that describe what could happen to you as a result of an animal bite.

HURT SING SICK HAPPY INFECTION

If you circled HURT SICK and INFECTION then you understood that a bite by an animal is a serious thing. And that's something good for you to know!!

By now you know that children could be bitten by all kinds of animals, that there are all kinds of bites and you have learned that animal bites are a serious problem.

Let's go on and find out what you could do if you should "by chance" be bitten !!

Exercise #3

Let's make believe that you were bitten on the arm by an animal "UGH". It's bleeding and it hurts . You want to know what to do so that you don't get Sick or get an Infection - Right? Right. Okay, remember in Exercise #2, I said that animals could pass on bad germs to you by their bite! So - the best way to get rid of the bad germs is to Wash the bite area with "Lots" of soap and warm water . Then, when it is nice and clean, cover it with a bandage. Next, have someone you know call your family doctor. This could be your mother or father, maybe a relative or even a neighbor. This way the doctor could decide if you need some extra treatment. Next, have this same person (who is helping you) call and tell the local health department that an animal bit

you and be sure to tell them what kind of animal bit you and where they could find the animal. You see, sometimes the animal that bites you may be sick and needs to be watched, too!!

Problem Question #3:

You have just been bitten by an animal ☹ !! Circle the letter for the things you would do.

A Have someone call your doctor.

B Go to the park and play games.

C Wash the bite area with lots of soap and warm water.

D Watch T.V.

E Have someone call the local health department and tell them the kind of animal that bit you and where it is.

If you circled A C E then you really know that taking care of your bite is more important than playing at this time!

☺ You are doing well!! ★

Remember, way back near the beginning, I said "I hope you never are bitten by an animal"! Okay, then - read on and learn some of the ways you ☺ could avoid being bitten by an animal.

Exercise #4

Basically, the only way an animal could let you know that he is afraid of you or doesn't like what you are doing to it, is by biting!!!

Animals that live in the wilds or woods are always afraid of people and if you try to catch a cute little raccoon to play with - there is a good chance that it will bite you . Sometimes when you are hiking, you may see a skunk stuck in a trap or a cat high up in a tree. If you try to Rescue it - you probably will be bitten ! Best to call an adult to help the animal. Teasing animals with a stick, a string or tossing stones at them will result in your being bitten . Sometimes your pet dog will bite if he is being Teased.

Stray animals - the ones that have no homes (usually dogs or cats) are not friendly and if you try to catch them you probably will be bitten . The best rule that could help you is not to play with or pet any animal that you don't know or bother any animal that is eating.

Practice Question #4:

There are ways to avoid being bitten by an animal. Fill in the blank with YES if it is okay to do something, or NO if it is not okay to do something.
Now Take Your Time!

A. _____ Pet and play with wild animals.

B. _____ Rescue a fox stuck in a trap.

C. _____ Tease a dog with a bone.

D. _____ Ask a friend if it is okay to pet his dog.

If you said NO to A B C and YES to D then you have learned how to avoid being bitten - and that's great!!

You have now completed this "practice" unit. You can name different kinds of WILD and DOMESTIC animals that bite people. You have learned that animal bites can be a serious problem. You have learned what to do if you are bitten and you have learned some ways to avoid being bitten! Now move on and do the Self-Test.

GOOD LUCK

SELF-TEST

1. You have learned that all kinds of animals can bite children.

   A. Name a WILD animal _____

   B. Name a DOMESTIC animal _____

2. Circle the words that describe what could happen to you if you are bitten by an animal.

   Infection Sleepy Sick Happy Hurt

3. Circle the letters of the things you would do if you were bitten by an animal.

   A. Don't tell anyone.

   B. Wash the bite area with lots of soap and warm water.

   C. Finish the game you are playing.

   D. Have someone call and tell your doctor.

   E. Have someone call and tell the local health department.

4. Fill in the blank "YES" if it is okay to do something, and "No" if it is not okay to do something.

   A. _____ Try to catch a stray dog.

   B. _____ Rescue a cat high up in a tree.

   C. _____ Leave the dog alone while he is eating.

   D. _____Poke and tease a raccoon with a stick.

   E. _____ Ask your friend if it is okay to pet his cat.

ANSWERS TO SELF-TEST

1. A. Skunk, fox, raccoon, bat, snake and others.

   B. Dog, cat, horse, cow, sheep, goat and others.

2. INFECTION SICK HURT

3. B D E

4. A. NO B. NO C. YES D. NO E. YES

* If today after school, you were bitten on the hand by a dog - do you think you would know what to do? _____ YES _____ NO

* Would you like to complete another unit? _____ YES _____ NO

MAY YOU HAVE A HAPPY DAY !!!

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HIGHWAY GLARE PATTERNS

by

ARCHIE W. SHERMAN JR.

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TITLE OF PACKAGE:	Highway Flare Patterns
AUTHOR:	Archie W. Sherman Jr.
INSTITUTION:	Bakersfield College
INTENDED STUDENTS:	General Public
ESTIMATED WORKING TIME:	30 minutes
MATERIALS NEEDED:	Flare
REVISED:	June 1, 1977

NOTE:

This package should be accompanied by a flare.
Either a tab type or plastic cap type will do.

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How would you like to be instrumental in the saving of a life? If you were to come upon an accident scene similar to the one illustrated above, would you know what action to take? Could you save a life by warning oncoming traffic of a hazard or directing traffic smoothly around danger? This instructional unit is designed to provide you with the necessary knowledge and skills to respond properly in the event you are faced with such an incident.

The above illustration is an example of a break-down in the highway transportation system. On occasions you will be required to take immediate corrective action when there is such a break-down. Often this action will be temporary in nature.

Highway transportation systems are designed to provide a safe and efficient environment for the transportation of persons and goods. This is accomplished through the use of traffic control and investigation concepts and techniques. The safety and efficiency of the system is affected by three dynamic elements. They are: the vehicle, the driver and the highway. Interruptions and blockages of traffic flow occur when there is a break-down in the operation of one or more of these three, such as an accident. Correspondingly, traffic interruptions and blockages call for immediate remediation.

The remedy most often used is that of highway flares to warn and redirect traffic around hazards. Flares can be used as a temporary measure to control traffic for a relatively short period of time until the situation requiring their use can be corrected or until other devices can be installed and maintained by an agency having responsibility for the particular highway system.

As you can well imagine, there are hazards associated with the use of flares. Some of the greatest dangers occur during the lighting process. The flare has two parts. The cap which includes a striking device and the body which has an igniting device. Take the flare that you have in your possession and examine it for these features.

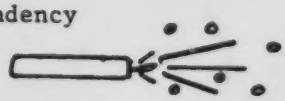
During the lighting process there is a popping tendency associated with the flare as it fires. Once lit, molten material will drop from the burning end. This molten material will cling to anything it touches and will burn instantly. Also the chemical which causes the flame to glow brilliantly will emit toxic fumes. These fumes are harmful if inhaled for an extended period. The flame itself generates an intense heat and will melt thin metal.

Anytime there is fire, caution must be taken, especially when there is combustible material close by. Since the purpose of the flare is to warn of hazards on highways, the danger of oncoming traffic is always a hazard. If you step into the path of a moving vehicle the danger may be a rude awakening.

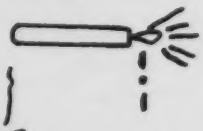
SUMMARY

The hazards associated with flare usage are:

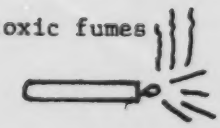
1. popping tendency



2. dripping molten material



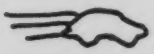
3. toxic fumes



4. flare flame

5. combustible material

6. moving traffic



When you feel you can identify the hazards associated with flare usage go on to practice question #1.

Practice Question #1

Visualize in your mind the hazards associated with flare usage and then list as many as you can remember.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Feedback

To find out if you were correct, review the material above.

Now I would like for you to consider the step-by-step process for lighting a flare safely. (Think about the steps listed below only.)

- Twist the cap and remove it from the body of the flare.
- Uncover the striking device on the cap.
- Place the body of the flare in your strong hand (if you are right-handed your right hand is your strong hand and the reverse is true if you are left-handed) and the cap in your weak hand.
- Extend your arms away from your body and place the igniting surface firmly against the striking surface.
- Turn your eyes away from the flare.
- Strike the flare by moving the flare across the striking surface with a motion away from your body.

Again, take the flare in your possession and examine the igniting device and striking surface. PLEASE DO NOT PRACTICE LIGHTING THIS FLARE INSIDE THE CLASSROOM BECAUSE OF THE HAZARDS YOU HAVE PREVIOUSLY LEARNED.

Striking the flare by moving it away from your body will help you to avoid flying sparks as a result of the popping tendency. You will avoid the flare flame and dripping molten material because the flare is at arm's length. Now you must avoid the toxic fumes being emitted and petroleum spillages which may be present.

Once a flare is lit and its use is no longer needed, it has to be extinguished. The extinguishing process is simple. Grasp the flare by the rear and tap out the flame by tapping the burning end against the pavement or curb. Sometimes, however, the flare will have burned too close to the end and it is difficult to handle. In this situation it may be better to allow the flare to burn out or use an object to move the flare to a location where it will not attract attention.

REMEMBER

Safe lighting of flares

1. Hold flare body in strong hand.
2. Strike with arms extended with motion away from your body.
3. Turn eyes away from flare.
4. Avoid molten material, combustible material and flying sparks.

   Avoid the emission of toxic fumes.

Safe extinguishing of flares

1. Tap flame out by tapping burning end against pavement or curb.
2. Allow flare to burn out when too short to handle.
3. Relocate where less attractive.

Practice Question #2

Determine whether Officer John in the following situation followed the correct procedure throughout the lighting process and the extinguishing process.

> Officer John took a flare and twisted the cap off and exposed the striking and igniting devices. He extended his arms with the body of the flare in his strong hand and placed the igniting device firmly against the striking surface on the cap which he held in his weak hand. Officer John turned his eyes away and struck the flare moving the igniting surface across the striking surface toward his body. To extinguish the flare Officer John grasped the flare by the rear end and carefully put out the flame by tapping the burning end against the pavement.

Did Officer John follow the correct procedure completely? Yes ____ No ____

If he did not, what did he do wrong? _____

_____

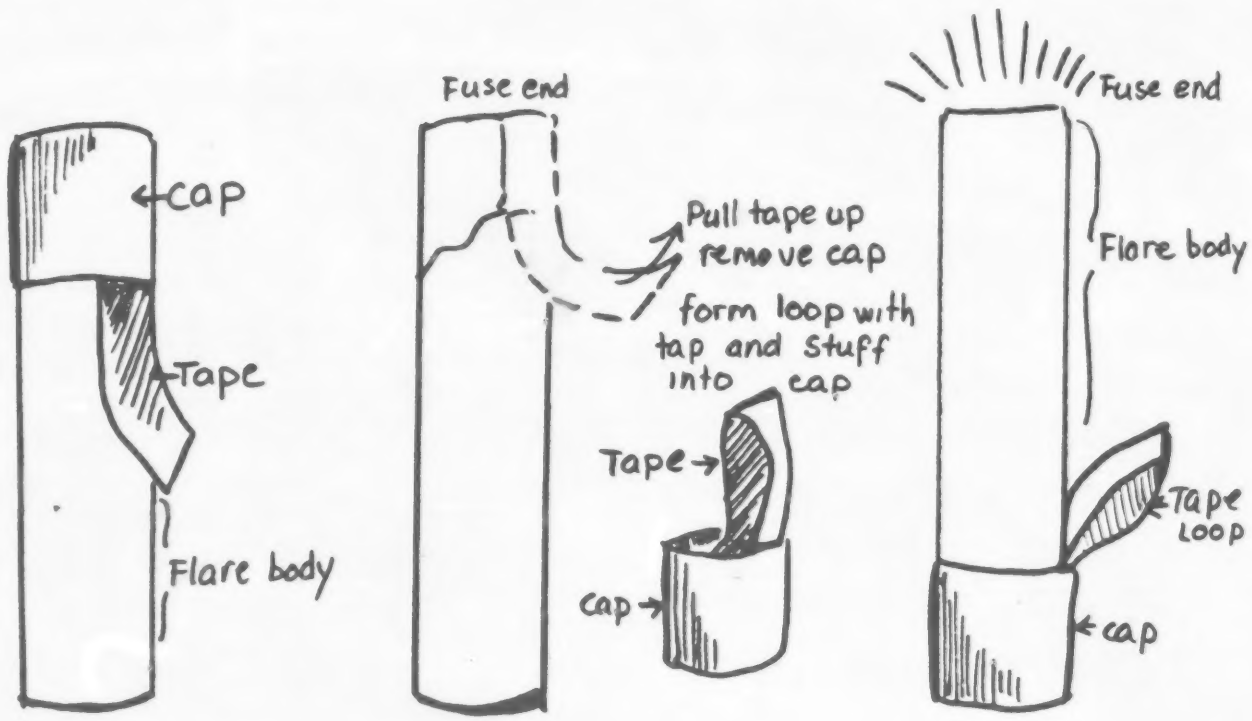
Feedback

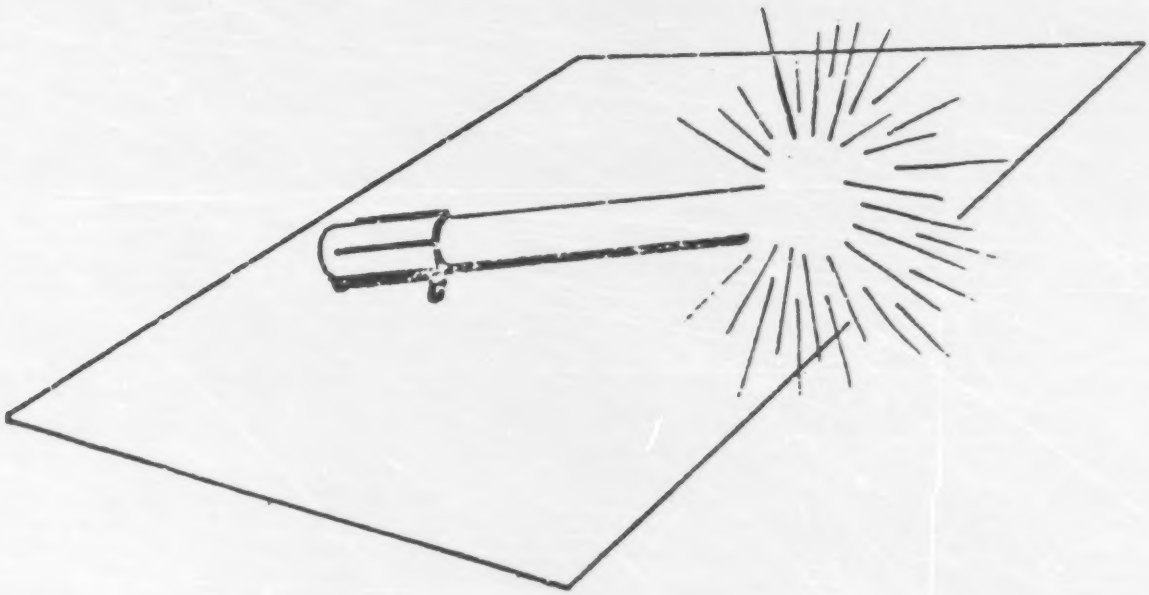
Officer John did everything correct except for moving the flare toward his body when he struck the flare. He should have moved the flare away from his body.

If you found Officer John's mistake, good for you. If you did not, study the material closely and you will be successful the next time.

Many times you will be faced with a situation where a flare pattern is needed on a sloping highway or during periods of gusting winds. You may wonder what can be done to prevent flares from rolling around. There are two types of flares: a tab type and a plastic cap type. The flare you have in your possession has the caps associated by both types. Both caps provide a way to stop flares from rolling. Study the illustration below. Take the flare you have and use the cap with the tape tab to form a loop as depicted in the illustration. When this cap with the loop is placed on the rear of the flare it will provide a stop to prevent the flare from rolling.

Now look at the plastic cap. Notice the tip that protrudes from its side. The tip provides a stop to prevent a flare from rolling when placed on its rear.





Practice Question #3

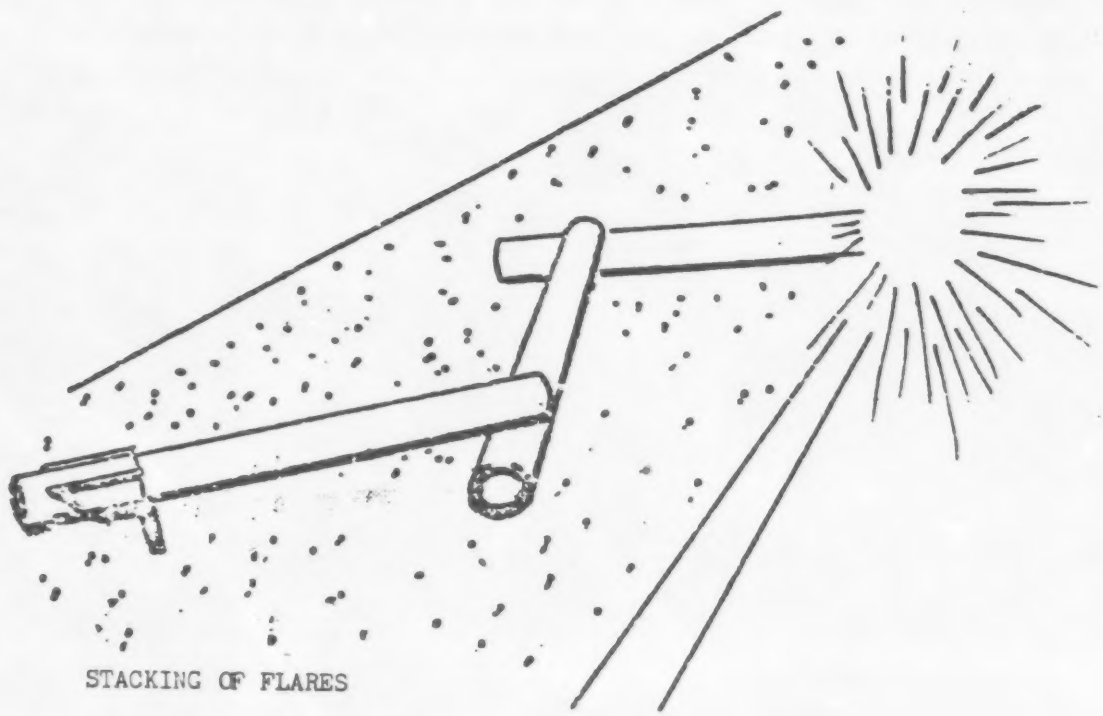
Now, pick up the flare and the cap which have been provided with this package. Form a loop and place the cap on the rear of the flare. Place the flare on a book and raise one end of the book to simulate a slope. See if the flare will roll. Now take the loop apart and remove the cap. Place it on the book [illegible] and raise one end. Did the flare roll more readily with the loop? Try the same thing with the plastic cap.

Feedback

The loop and the plastic tip should have provided a stop to prevent the flare from rolling. The flare may slide because of the smooth surface you may have placed it on, but it should not have rolled. If the flare rolled with the loop, maybe the loop was too shallow. Form a larger loop and try the experiment again.

When you are alone at the scene of an accident and you know it will be a while before assistance will arrive, there may be a need to lay a flare pattern with an extended life. That is, the flare pattern must last longer than usual.

It is possible to place flares in a crisscross pattern or stack them so that when the first flare has nearly burned out, it will light the next flare. Look at the illustration below for an example of this technique.



STACKING OF FLARES

STUDY

Study the illustration and think in terms of how the technique works.

Practice Question #4

Explain in your own words how crisscrossing or stacking can extend the life of a flare pattern.

_____

_____

_____

Feedback

Were you able to explain how a flare pattern life is extended? If so, fine. If not, think about a timed fuse; the longer the fuse, the longer the time. One flare will light the next one when they are stacked.

STOPPING DISTANCE CHART

PASSENGER CARS ONLY

SPEED	THINKING DISTANCE	BRAKING DISTANCE	TOTAL FEET
25	27 FEET	39 FEET	66
35	38 FEET	76 FEET	114
45	49 FEET	125 FEET	174
55	60 FEET	187 FEET	247
65	71 FEET	261 FEET	332

THINKING DISTANCE—distance traveled before brakes are applied while driver is reacting to danger.

BRAKING DISTANCE—distance traveled after brakes have been applied.

Take a look at the above "Stopping Distance Chart". Notice the speed column and the total feet column. The speed column is used to locate the speed of the traffic. You then check the total stopping distance in the total feet column. For example, if the speed of traffic was determined to be 25 mph, look across horizontally to the total feet column. You will find that the total stopping distance for 25 mph is 66 feet (thinking and reaction time/ distance plus the actual braking distance). For 25 mph speed you'd start setting your flares 66 feet away from the accident. If traffic speed was 35 mph, you'd start setting flares 114 feet away, and so on.

Since speed is a critical factor, legal and actual speed of oncoming traffic is of great importance. Once you have determined the speed of traffic you should refer to the "Stopping Distance Chart" for the closest speed to the speed of traffic. Always select the higher speed in order to determine the safe stopping distance. After you have determined the stopping distance, you should begin your flare pattern that distance away from the hazard.

Practice Question #5

By referring to the "Stopping Distance Chart" determine how far away from the hazard should the flare pattern begin if the actual speed of traffic is 45 mph.

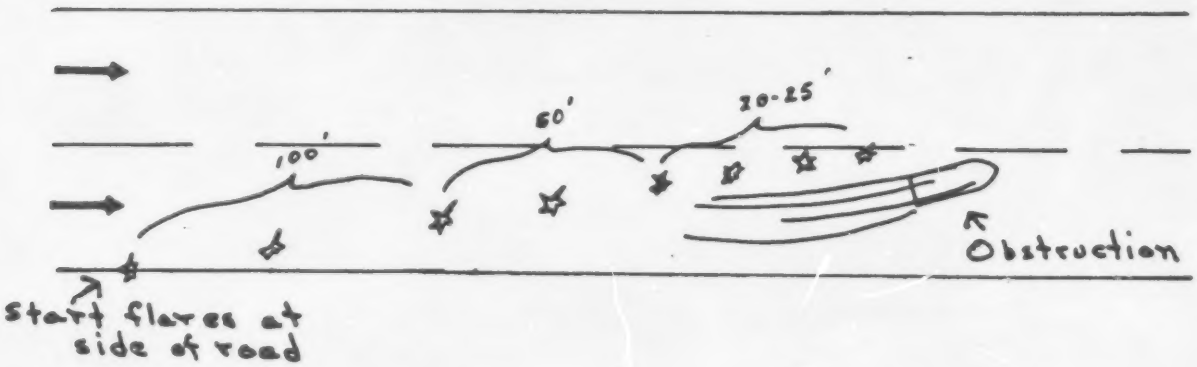
_____

Feedback

Your answer should be 174 feet.

It is important that you know that there is as much danger in having too many flares placed at a scene as too few. More flares than necessary blending with all the flashing red lights of stopping vehicles can lead to confusion.

Flare patterns must be understandable. Flares set too close together from a distance will blend into a single light and lose their value. Flares should be placed in a straight line and at least 20 to 25 feet apart nearest the obstruction. This distance should be gradually increased to 50 and 100 feet apart at the farthest distance. This spacing is depicted in the illustration below.



NOTE

Flare patterns must be understandable. Flares should be placed:

1. 20 to 25 feet apart nearest the obstruction.
2. so that they gradually increase to 50 feet.
3. approximately 100 feet farthest from the obstruction.

Practice Question #6

Officer John arrived at a traffic accident scene. He determined that a 332' flare pattern was needed because the speed of traffic was 65 mph. He began a flare pattern approximately 332 feet from the obstruction. Farthest away he spaced the flares 20 to 25 feet apart and as he approached the obstruction he gradually increased the spacing to 50 feet and 100 feet nearest the obstruction.

Did Officer John take the proper action? Yes _____ No _____

If he did not, what did he do wrong? _____

_____

_____

Feedback

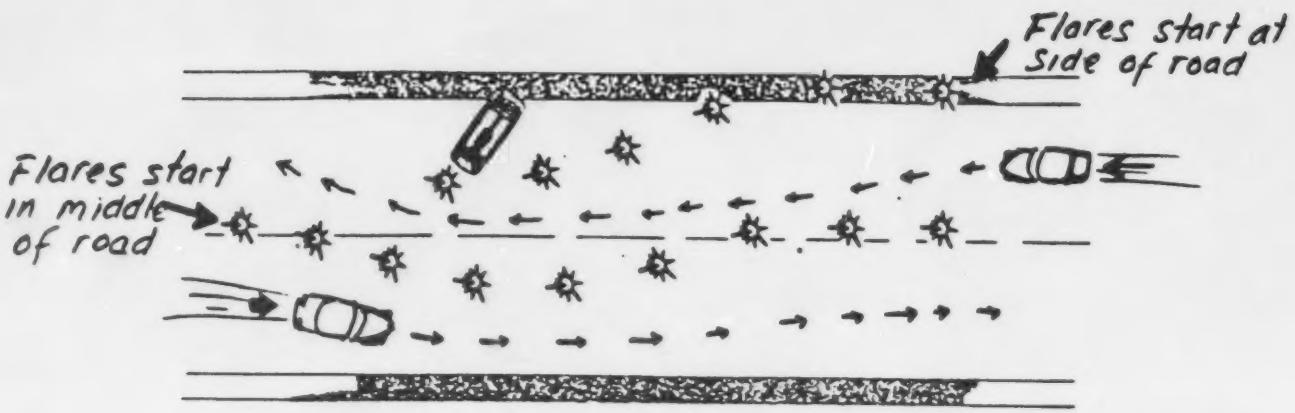
You should have discovered that Officer John did everything opposite to how the flares should have been.

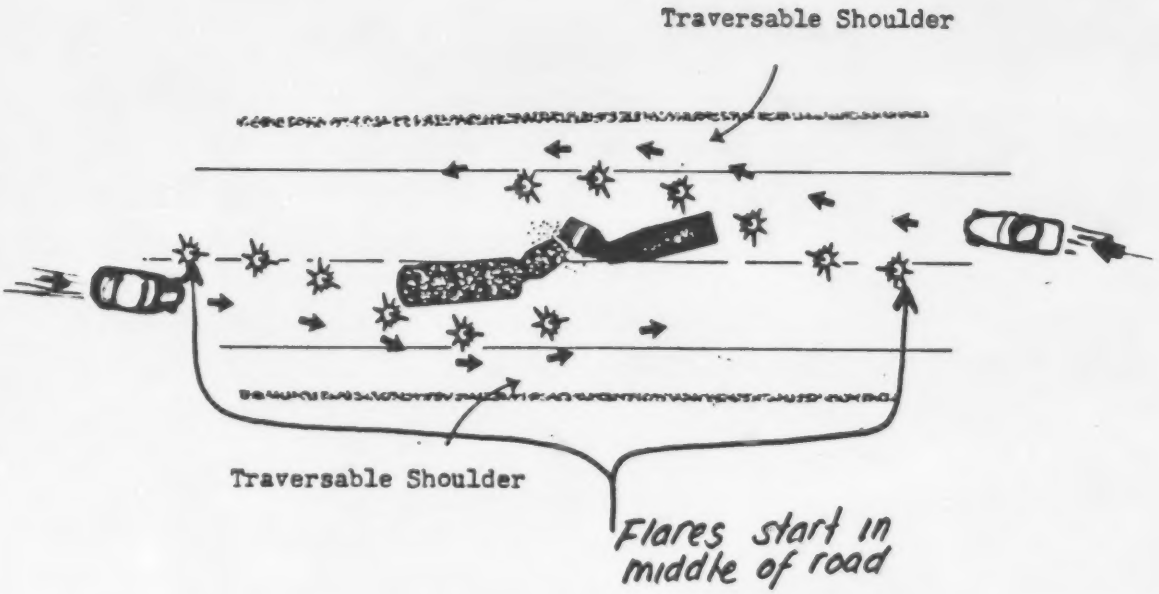
After progressing to this point of the instructional unit you will have covered many aspects of flare usage including giving due regard to the presence of flamable material and traffic flow. What is still lacking is the laying of flare patterns and/or alignment which will best protect persons and property.

Upon arriving at a scene your responsibility will be to visually check for hazards and blocked lanes and decide the best flare alignment to use. There are basic techniques essential to this process and they are as follows:

1. Your flare patterns should be set to direct traffic flowing in the same direction to one side only, leading traffic away from hazards and/or injuried.
2. You should avoid decision making situations and lead traffic in simple paths and straight lines whenever possible.
3. When you want traffic to change lanes, set a gradual alignment.

After studying the following illustrations you will find that the patterns illustrated have gradual and flowing lines, all traversable surfaces are used when necessary, and opposing lanes are used in the absence of traversable shoulders. Sometimes traversable shoulders are present but are blocked by obstructions and/or flamable spillages. In this case the use of opposing lanes may become necessary.


Flares start at side of road
Flares start in middle of road

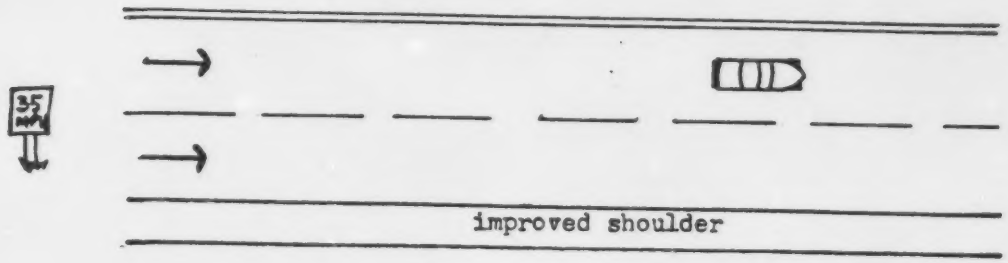

Traversable Shoulder
Traversable Shoulder
Flares start in middle of road

SUMMARY

1. Direct traffic to one side only.
2. Avoid decision making situations.
3. Direct traffic into simple paths with gradual alignments.
4. Use traversable shoulders when necessary.
5. Use opposing lanes in the absence of traversable shoulders or blockage of traversable shoulders.

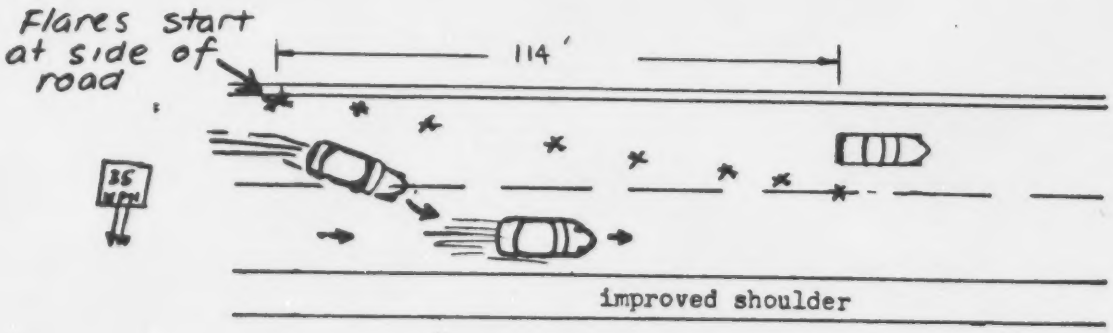
Practice Question #7

Using the symbol * indicate the flare alignment you would use to guide traffic around a stalled vehicle in the inside lane of a two lane highway. The speed of traffic is about 35 mph. Use diagram below. Do not forget to use the "Stopping Distance Chart" on page 12.



Feedback

Your flare pattern should have looked similar to the following. If so, you are ready for the post-test on the next page.



POST-TEST

1. List four of the six hazards associated with the use of flares.

   a. _____

   b. _____

   c. _____

   d. _____

2. Identify the proper method for lighting and extinguishing flares safely.

Lighting Process	Extinguishing Process
a. _____	a. _____
b. _____	b. _____
c. _____	c. _____
d. _____	

3. Describe how to prevent flares from rolling.

   Tab type: _____

   _____

   Plastic type: _____

   _____

4. Describe how the life of a flare pattern can be extended.

   _____

   _____

   _____

5. Read the following passage and respond to the question below.

   As Officer John approached the scene of an accident he noticed that the speed of traffic was about 53 mph. After his arrival he decided that he better lay a flare pattern to warn oncoming traffic of the hazard. He consulted his "Stopping Distance Chart."

Speed	Thinking Distance	Braking Distance	Total Feet
25	27 feet	39 feet	66
35	38 feet	76 feet	114
45	49 feet	125 feet	174
55	60 feet	187 feet	247
65	71 feet	261 feet	332

From his chart Officer John determined that he should begin his flare pattern about 247 feet away.

Did Officer John follow the correct procedure for determining the flare distance? Yes ____ No ____

If he did not, what did he do wrong? _____

_____

6. Which of the following is not identified as the spacing and aligning requirements for flare patterns?

   a. Closest to the hazard the flares should be spaced 20 to 25 feet apart.
   b. Farthest from the hazard the flares should be gradually spaced to 100 feet apart.
   c. The spacing of the flares should be spaced uniformly from the hazard to the farthest warning distance.
   d. The alignment should be gradual so that traffic can flow smoothly around the hazard.

Read the following passage and then respond to items 7 and 8.

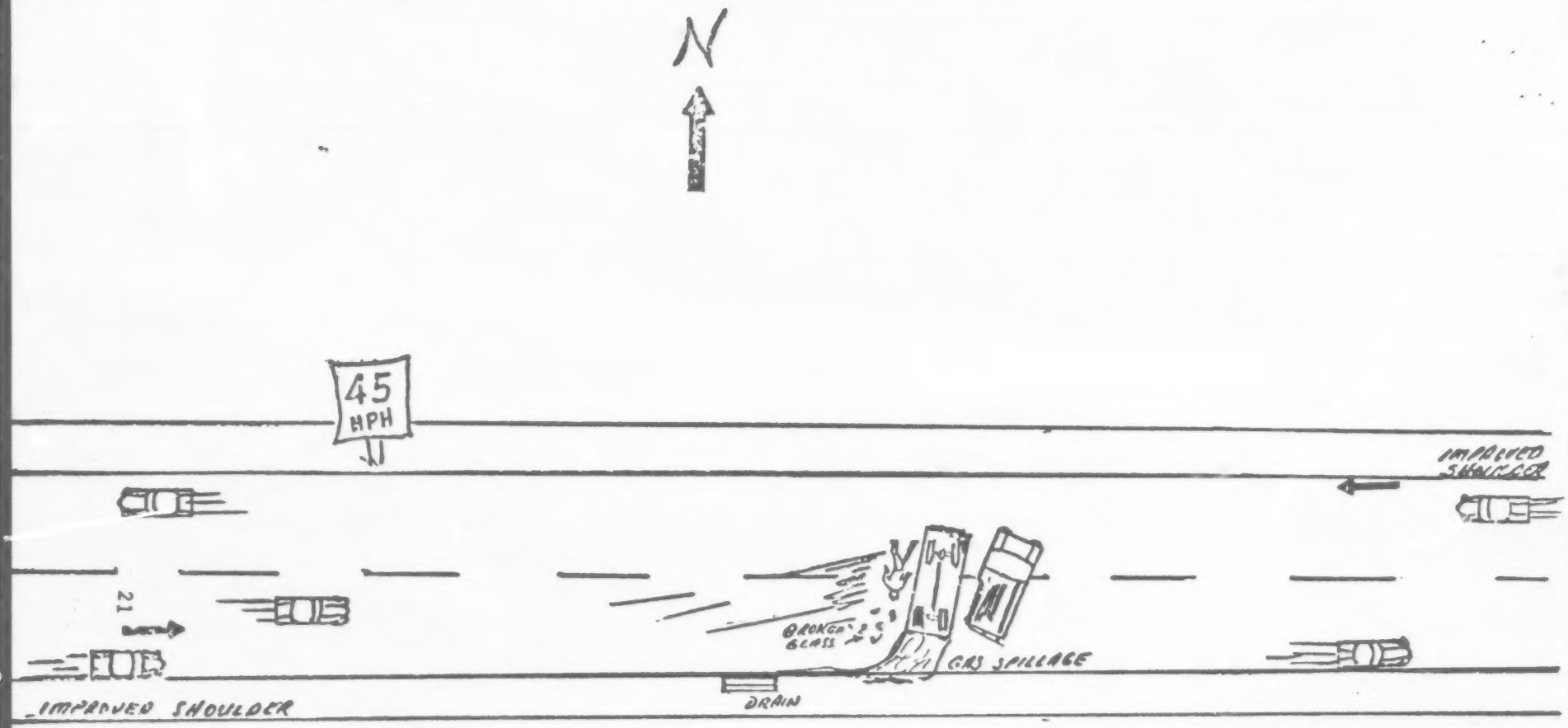
You have received a call of an injury accident on Pace Road. Upon your arrival you observed what is depicted in the illustration on the next page. There is an injured person (broken arm and leg) lying near an overturned car with gasoline leaking onto the highway. Also, there is a pickup involved with extensive damage to its left rear.

Traffic prior to the scene is flowing about 50 mph. As they approach the blockage there is swerving and squealing of tires. The weather is clear except for mild gusting winds. The highway is slightly uphill eastward.

You immediately decide that there is a need to warn oncoming traffic of the injured and hazard.

7. Study the illustration and check for hazards and blockages and decide what flare alignment to use.

8. Using the symbol * draw a flare pattern on the illustration which will best protect the scene.



PLEASE NOTE:

1. Speed of traffic is 50 mph
2. Weather is clear
3. Mild gusting winds
4. Slight grade eastbound (uphill)

POST-TEST SCORING KEY

1. a. popping tendency
   b. dripping molten material
   c. toxic fumes
   d. flare flame
   e. combustible material
   f. moving traffic

2. Lighting Process
   a. hold in strong hand
   b. extend arms/strike away from body
   c. turn eyes away
   d. avoid hazards identified above

   Extinguishing Process
   a. tap out against pavement or curb
   b. allow to burn out
   c. relocate

3. Tab type: form loop with cap and place on end of flare;position flare

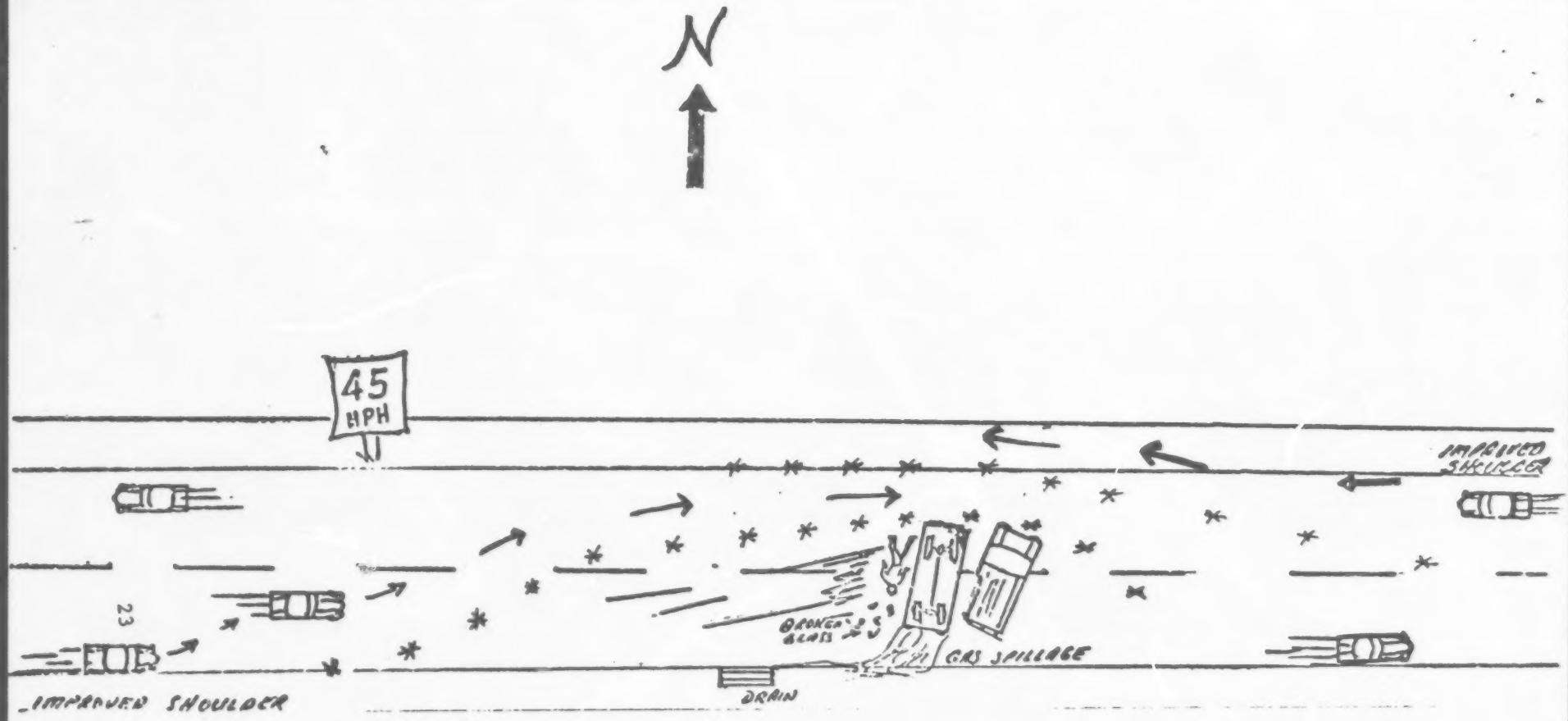
   Plastic type: place cap with the tip on end of flare and place into proper position

4. Stack flares in a crisscross pattern so that when the lighted flare burns down it will ignite the next flare.

5. Yes

6. c

7-8. Check your answers on the Page 23 diagram.



PLEASE NOTE:

1. Speed of traffic is 50 mph
2. Weather is clear
3. Mild gusting winds
4. Slight grade eastbound (uphill)

Correct pattern:

- o traversable shoulder used
- o opposing traffic lane used
- o flammable material avoided
- o gradual alignment set
- o loops formed to prevent flares from rolling
- o consideration given to extend flare pattern life
- o flare distance at least 247 feet

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A PROJECT OF THE LEAGUE FOR INNOVATION IN THE COMMUNITY COLLEGE

SELF-DEFENSE FOR WOMEN

By

Barbara Murphy

Lauren Richardson, Illustrator

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TITLE OF PACKAGE:	Self-Defense for Women
AUTHOR:	Barbara Murphy
INSTITUTION:	Kaiser-Permanente Medical Group, Sacramento, Calif.
INTENDED STUDENTS:	Any female or elderly person
ESTIMATED WORKING TIME:	40 minutes
MATERIALS NEEDED:	Partner or long mirror for post-test demonstration
REVISED:	October 1, 1977

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SELF-DEFENSE FOR WOMEN

INTRODUCTION

It is an increasing opinion that attacked individuals can fight back using practical self-defense methods that do not demand strength or Karate kicks. It does demand some practice so that you will be able to react instinctively in an emergency.

You should not fight to save a handbag or wallet, but you should concentrate on protecting yourself from an attack.

If you can act "cool" and if you build up your self-confidence by taking that time to practice the defenses listed, you can adequately free yourself from an attacker.

OBJECTIVES

The overall objective in this report is:

to present a mini-system of self-defense for women

Sub-objectives:

- describe several protection-methods against street crimes
- identify two favorite targets of muggers and hoodlums
- compare the two main decisions a woman being attacked must face
- list the two most vulnerable areas of an attacker
- Identify three easily carried weapons
- demonstrate the defense methods for the following:
  - a hand clamps across your mouth to keep you from screaming
  - an arm tightens around your neck
  - your arms are pinned to your side
  - a two-handed neck choke from the rear
  - a bear hug
  - both hands on one of your wrists tugging you
  - a one-handed grab on your wrist
  - your neck grabbed from the front

We are going to be studying a mini-system of self-defense for women.

As a rule, common sense is the best protection against a street crime. You should be careful not to let your hand bag drag by its strap; never show large amounts of cash in public; avoid eye contact with strangers; use well-lighted streets, even if it means going out of your way; walk in twos and threes when possible; use the middle of the road at night--traffic permitting--instead of tree shaded lanes and keep your car locked at all times.

Practice Question #1

See if you understand the various ways your actions can cause you to be more vulnerable to an attack. List seven of them.

a) _____

b) _____

c) _____

d) _____

e) _____

f) _____

g) _____

Can you think of two more? (Optional)

a) _____

b) _____

If you listed the following answers for part 1, you are correct!

a) Allowing your handbag to drag by its strap

b) showing large sums of money in public

c) having eye contact with strangers

d) using dimly lit streets

e) walking alone at night

f) using tree-shaded lanes at night

g) leaving your car unlocked all the time

Still too often, women and the elderly, the two favorite targets of muggers and hoodlums, are grabbed and terrorized by the frightening words "I'll kill you," as they are dragged into a park or alley, or as they feel the sudden pressure of an arm around their neck.

At a split moment, the woman is aware of an attacker whose intention may be robbery, rape, and/or murder. If she shakes off her fear, the decision then becomes hers: to remain passive and submissive, as she has been conditioned to for many years, or to fight!

Practice Question #2

Muggers and hoodlums usually prey on two catagories of people. Name them

a) _____ b) _____

When being attacked, a victim has two alternatives. List them.

c)_____

d) _____

If you gave these answers, you are right.

a) women

b) the elderly

c) be passive and submissive

d) fight

There is an increasing opinion among police that women and the elderly can fight back, using practical self-defense methods which do not demand strength or Karate kicks, leaps, or throws. However, they do demand some practice so that you will be able to react instinctively in an emergency.

Training programs agree that the two most vulnerable areas of any attacker are his eyes and testicles. Instead of trying to measure your strength against his, a woman must be willing to jab rigid fingers or thumbs into her assailant's eyes, or to grab and wrench his testicles with every bit of her strength. In doing so, she must forget she is a lady and protect herself.

Practice Question #3

A woman can best protect herself by striking at the two most vulnerable areas of an attacker, List them.

a) _____ b) _____

Feedback

The questions should have been answered in the following manner:

a) False. Yelling "fire" gets the quickest response from the public.

b) True.

c) False. You should faint, become dead weight, or induce vomiting.

d) True.

e) True.

f) True.

Now it's time to learn eight physical methods to defend yourself against specific attacks. Study the mechanisms of defense one at a time, either practicing each (carefully) on a partner or in front of a full-length mirror. Repeat each method until you feel comfortable with it before moving on to the next.

Your correct answers are:

a) his eyes b) his testicles

A woman must be willing to disable her attacker so she can break away, run, and shout for help. In her cry for help, police advise screaming "fire" instead of "help" or "police" because the public"s response is usually quicker.

Easily carried weapons are aerosol dog repellent sprays marked "keep out of eyes." A long hatpin is also effective if jabbed into the eyes, as well as an umbrella or a cane.

What should you do if you are faced with a gun or a knife or if you simply cannot resist? Fainting or becoming dead weight are two excellent suggestions. In addition, thrusting your fingers down your throat to vomit disgusts the attacker and he may flee. Even quietly telling the sexual molester that you have VD may ward him off.

Practice Question #4

For each of the following, answer true or false.

a) Yelling "help" gets the quickest response from the public.

b) Easily carried self-defense weapons are dog repellent sprays, a hatpin, an umbrella, and a cane.

c) If you are faced with a gun or a knife and you can't resist, you should scream as loud as you can.

d) Fainting is a means of self-protection.

e) Causing vomiting by thrusting your fingers down your throat discourages an attacker.

f) Telling an attacker you have a sore throat has little effect on him.

a) A hand clamps across your mouth to keep you from screaming.

***

Immediately grab the little finger of the attacker's hand and pull down and away while you drive the heel of your foot into the attacker's foot.

b) Your arms are pinned to your side.

***

Move your hips to one side and strike the groin with your hand. Bring your foot down hard on his instep while you tear down and away at the little finger of his hand to escape.

c) His arms tighten around your neck.

***

Immediately turn your face into his elbow so you can breathe. Place your right hand directly under the elbow, your left hand near his waist. Scrape your foot down his shin bone onto his instep and stomp with all your strength. Pull down on his wrist and push up on his elbow, creating a space to slip your head through down and out, pushing him away.

BEFORE YOU CONTINUE to Defensive Measure d), TURN TO PAGE 11 and answer questions a, b, and c. Check your answers on Page 12. THEN RETURN TO THIS PAGE TO CONTINUE learning more Defensive Measures.

---

d) You must react quickly to a two-handed rear choke.

***

Kick back to the attacker's shin or drive your heel into his instep Quickly raise one arm up and pivot around to break his hold. Come down hard with your fist to the side of his neck as you step away.

e) A bear hug

***

Leaves his groin or genitals vulnerable. Don't hesitate to thrust as hard as you can into those areas. Drive your heel into his instep and swing free.

STOP AGAIN TO CHECK YOUR LEARNING. Turn to Page 11, answer questions d and e, and check your answers on Page 12. THEN RETURN TO THIS PAGE TO CONTINUE with f, g, h.

---

f) Both hands on one of your wrists so he can drag you along.

***

Kick hard to his shin or knee to weaken his hold. Tightly clench your captured hand, put your free hand over your clenched fist, pull up and out.

g) A one-hand grab on your wrist is easier to break.

***

Drive your heel into his instep while pulling your clenched fist against his hold and out.

h) Grabs your neck from the front.

***

His eyes are open to counterattack if he grabs your neck from the front. Thrust either two stiffened fingers or your thumbs into the inside corners of his eyes and follow with an outward movement. Swing both hands up between his arms and out to break out of his hold.

PRACTICE QUESTION #5

In the exercise below, read each situation and describe the self-defense mechanism that you would use to free yourself from an attacker.

SITUATION	SELF-DEFENSE MECHANISM
a) a hand clamps across your mouth to keep you from screaming	a)
b) an arm tightens around your neck	b)
c) Your arms are pinned to your side	c)
d) a two-handed neck choke from the rear	d)
e) a bear hug	e)
f) both hands on one of your wrists tugging you	f)
g) a one-handed grab on your wrist	g)
h) a neck grab from the front	h)

FEEDBACK

If you listed the following answers, you are correct.

a) Immediately grab the little finger of the attacker's hand and pull down and away while you drive the heel of your foot into the attacker's foot.

b) Move your hips to one side and strike the groin with your hand. Bring your foot down hard on his instep while you tear down and away at the little finger of his hand to escape.

c) Immediately turn your face into his elbow so you can breathe. Place your right hand directly under the elbow, your left hand near his waist. Scrape your foot down his shin bone onto his instep and stomp with all your strength. Pull down on his wrist and push up on his elbow, creating a space to slip your head through down and out; pushing him away.

d) Kick back to the attacker's shin or drive your heel into his instep. Quickly raise one arm up and pivot around to break his hold. Come down hard with your fist to the side of his neck as you step away.

e) A bear hug leaves his groin or genitals vulnerable. Don't hesitate to thrust as hard as you can into those areas. Drive your heel into his instep and swing free.

f) Kick hard to his shin or knee to weaken his hold. Tightly clench your captured hand, put your free hand over your clenched fist, pull up and out.

g) Drive your heel into his instep while pulling your clenched fist against his hold and out.

h) His eyes are open to counterattack if he grabs your neck from the front. Thrust either two stiffened fingers or your thumbs into the inside corners of his eyes and follow with an outward movement. Bring both hands up and out to break out of his hold.

POST-TEST

1. List seven things that common sense tells us is the best protection against street crime.

   a) _____

   b) _____

   c) _____

   d) _____

   e) _____

   f) _____

   g) _____

2. Name two favorite targets of muggers and hoodlums.

   a) _____ b) _____

3. If you are being attacked, what two alternatives are available to you?

   a) _____

   b) _____

4. When being attacked, a woman must forget she is a lady and protect herself by striking at the two most vulnerable areas of the attacker:

   a) the shin bone and stomach area
   b) the eyes and testicles
   c) the knee and face
   d) the eyes and thumb

5. You have decided to carry a protection weapon with you. Which of the following would <u>not</u> likely be recommended for the average citizen to carry? Circle the best answer.

   a) a long hatpin
   b) an umbrella
   c) an aerosol dog repellent spray marked "keep out of eyes"
   d) a gun

6. Show your acquired knowledge and skill by demonstrating the eight Self-Defense mechanisms that a woman can use to protect herself against an attacker.

ANSWERS TO POST-TEST

1. a) Allowing your handbag to drag by its strap
   b) Showing large sums of money in public
   c) Having eye contact with strangers
   d) Using dimly lit streets
   e) Walking alone at night
   f) Using tree-shaded lanes at night
   g) Leaving your car unlocked

2. a) Women
   b) The elderly

3. a) Be passive and submissive
   b) Fight

4. B

5. D

6. If you train with a friend, make certain not to hurt him/her. You can also practice breaking muggers' grabs and your counterattacks in front of a mirror.

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A PROJECT OF THE LEAGUE FOR INNOVATION IN THE COMMUNITY COLLEGE

CODE RED AND USE OF FIRE EXTINGUISHER

By

Pauline Healy

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TITLE OF PACKAGE:	Code Red and Use of Fire Extinguisher
AUTHOR:	Pauline Healy
INSTITUTION:	Orange Coast College, La Mirada, Calif.
INTENDED STUDENTS:	Health workers; hospital staff; interested citizens
ESTIMATED WORKING TIME:	20 minutes
MATERIALS NEEDED:	None essential; however, it would be helpful if a fire alarm box and fire extinguishers (upright and chrome-blue top) were available
REVISED:	November 15, 1977

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INTRODUCTION

The purpose of this package is to develop knowledge and skills in the operation of a fire alarm box and fire extinguishers so that you may act efficiently during a Code Red. Upon its completion, you will be able to explain how to operate a fire alarm box and when to use a fire extinguisher.

OVERALL OBJECTIVE:

The new employee will be able to initiate a Code Red and demonstrate his/her knowledge and skills in the use of the three types of fire extinguishers.

SUB-OBJECTIVES:

* Define in writing the procedure for initiating a Code Red.
* Describe, in writing, the three classifications of fire and the types of fire extinguishers used on each classification.
* Recall the operation of one of the three fire extinguishers.
* Identify the location and types of the fire extinguishers in the area.

READ AND STUDY THE FOUR DEFINITIONS BELOW:

FIRE ALARM BOX (Red)

Code Red	Fire
Alarm Box	Red with lettering in white saying "Fire Alarm"
Initiating an Alarm	Push down bar on red box which breaks glass rod--initiating Fire Alarm
Procedure for Code Red	Person discovering fire will: 1. Remove people from fire area 2. Confine fire to one area (close door) 3. Pull fire alarm 4. Get fire extinguisher

QUESTIONS: Please cover the previous lesson and try to answer these questions

1. Pushing the bar down on the red fire alarm box will initiate a _____ _____.

2. List below the steps in a Code Red:

   a.

   b.

   c.

   d.

1. Fire alarm or Code Red

2. Person discovering fire will:

   Remove people to safety

   Confine fire (close doors)

   Sound fire alarm

   Get fire extinguisher

Great--now that you know how to initiate an alarm and Code Red procedure, please proceed to the next page.

Thanks

FIGURE 1

Now, about fires and extinguishers: (See Figure 1.) There are three types of fire.

Class A - Anything that burns and produces ash (wood, paper, textile).

Class B - Inflammable oils and liquids (grease, alcohol).

Class C - Electrical

FIGURE 2

See Figure 2. Fire extinguishers are used according to type of fire and this is stated on each extinguisher:

Class A extinguisher is used on Class A Fire (water) - wood, textile, paper.

Class B extinguisher is used on Class B Fire (dry chemical) - oils and inflammable liquids.

Class C extinguisher is used on Class C Fire (dry chemical) - electrical.

Multi-purpose is used on all types of fire.

NEVER USE A CLASS A EXTINGUISHER ON A CLASS B OR C FIRE!!

QUESTIONS: Covering the previous portion, please answer these questions.

3. Describe the following:

   a. Class "A" fire -

   b. Class "B" fire -

   c. Class "C" fire -

4. Complete the following:

   a. Water fire extinguishers are used on Class ____ fires.

   b. Dry chemicals are used on a Class ____ and ____ fire.

   c. Never use a Class ____ extinguisher on a Class B or C fire.

3. a. Anything that burns and produces an ash (wood, paper, textile).

   b. Inflammable liquids, greases

   c. Electrical

4. a. Class A fire

   b. B and C fires

   c. Water extinguisher

How did you do? If O.K. - please keep going

If not O.K. - please review previous page

ALL ABOUT FIRE EXTINGUISHERS

How to operate a fire extinguisher:

a. Hold in an upright position.

b. Pull pin in handle (on top).

c. Squeeze handle, while-------

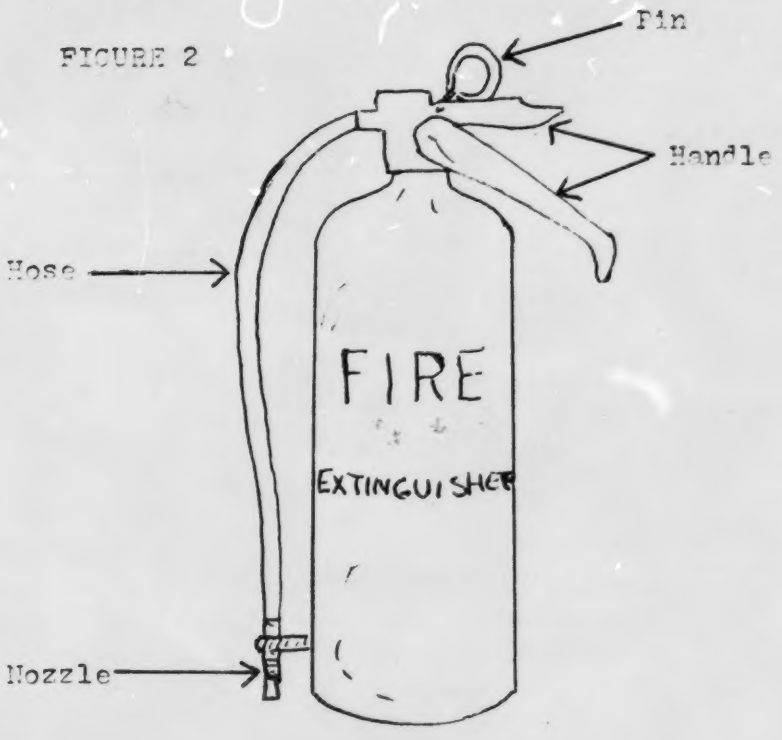
d. Directing nozzle of hose at the base of fire.

How to operate a blue twist-top chrome extinguisher:

Turn bottom up on a chrome extinguisher with blue twist type handle. This is also a water extinguisher - therefore, please hold hose or you'll get wet!

Instructions for operation of fire extinguishers are found on all fire extinguishers.

FIGURE 2



QUESTIONS: Please cover previous portion and answer these questions.

5. Write down the steps used in the operation of a fire extinguisher.

   a.

   b.

   c.

   d.

6. Blue twist type handle on chrome extinguisher should be

   _____ _____ _____ to

   operate, and you must hold on to the hose.

5. a. Hold in an upright position

   b. Pull pin out of handle

   c. Squeeze handle

   d. Direct nozzle at the base of the fire

6. Turned bottom up

Now you know how to operate a fire extinguisher - right?

Do you remember that you need to hold on to the hose on the chrome extinguisher with the blue twist type handle? No?? Bet you get wet - sorry!

Remember, hold onto this hose as you turn bottom up -

Fire extinguishers in this building are found in many different places. You should be able to find them in this building, regardless of location, and recognize their type.

QUESTIONS:

7. Find and list the location and types of at least two fire extinguishers in this building.

	LOCATION		TYPE
a.	_____	-	_____
b.	_____	-	_____

Were you able to find at least two? If you found them----great!

Oops! If you missed one ASK SOMEONE. Everyone should know the location of fire extinguishers in their area - and how to operate them. <u>You never know when you might need to use one</u>.

CHECK YOURSELF OFTEN!!!!!

POST-TEST

1. What does Code Red mean?

2. How do you initiate a Code Red?

3. What color is the fire alarm?

4. Define procedure for Code Red.

5. a. Match the first column with the second.

____	1. Multipurpose A B C	a.	Electrical
____	2. Class A	b.	Inflammable liquids & oils
____	3. Class C	c.	May be used on all types of fire
____	4. Class B	d.	Burns and produces ash

b. Classification of fire is on the _____ _____.

6. Where are the instructions for operating the fire extinguisher found?

7. Describe the steps used in operating a fire extinguisher.

8. Fire extinguishers are found in what locations in this building, and what type of fire extinguishers are they?

SCORING KEY: 12 1/2 for each question

POST-TEST ANSWER KEY

1. Fire

2. Pull the fire alarm

3. Red

4. Person discovering the fire will:

   a. Remove persons to safety

   b. Close the door to fire area

   c. Pull the fire alarm

   d. Get the appropriate fire extinguisher to fight fire

5. a. 1. c ; 2. d ; 3. a ; 4. b

   b. Fire extinguishers

6. On the fire extinguishers

7. a. Hold in upright position

   b. Pull pin

   c. Squeeze handle

   d. Direct nozzle at base of fire

8. If there is a fire, it is important to know where fire extinguishers are located - and the types, so whatever kind of fire it is, you will know which type extinguisher to use.

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JUL 17 1981